Transportation Library

JUNE 3, 1944

JUN 7 1944

Railway Age

Founded in 1856

SAVE 1500 LBS. of CRITICAL STEEL

...ON A 16 DOOR COMPOSITE GONDOLA!

WINE

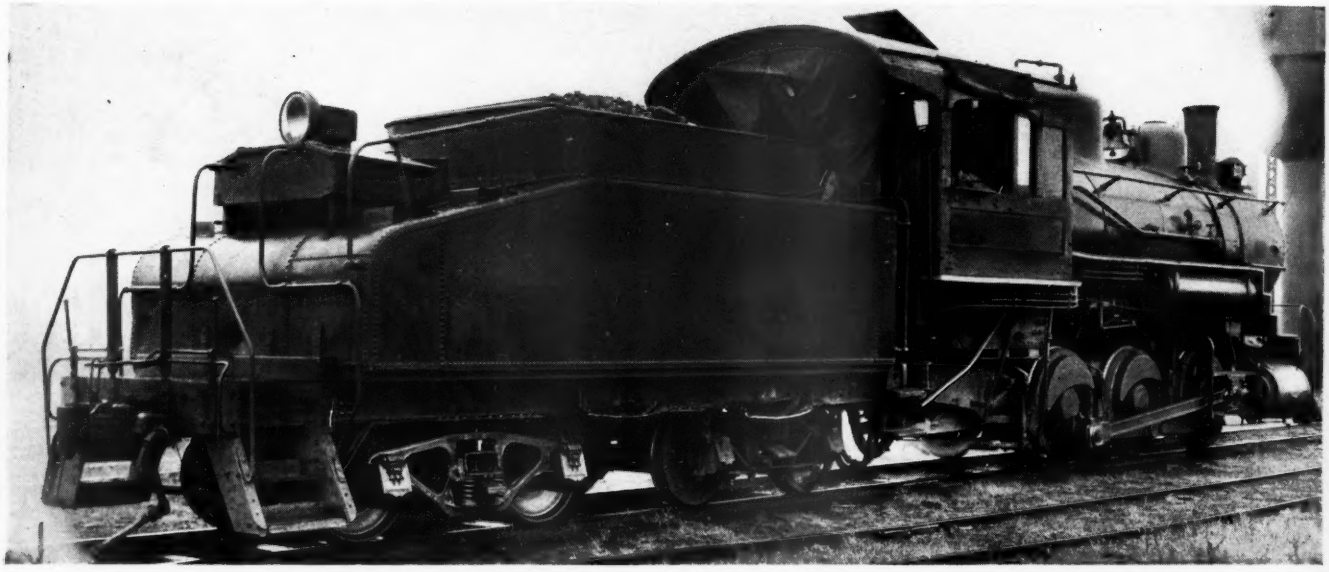
THE WINE RAILWAY APPLIANCE CO.
TOLEDO, OHIO

TRANSPORTATION LIBRARY

WINE DOOR LOCKS

UNIT TRUCK

Seven Years of 24-hour Service In The Hardest Kind of Switching



In all these years there has been no replacement of the UNIT PARTS

UNIT BRAKE BEAMS are put up to stay up

Approved for interchange

Full information as to licensees authorized to manufacture Unit Trucks will be furnished upon request.

UNIT TRUCK CORPORATION

140 CEDAR STREET **NEW YORK 6, N. Y.**

Published weekly by Simmons-Boardman Publishing Corporation, 1309 Noble Street, Philadelphia, Pa. Entered as second class matter, January 4, 1933, at the Post Office at Philadelphia, Pa., under the act of March 3, 1879. Subscription price $6.00 for one year U. S. and Canada. Single copies, 25 cents each. Vol. 116, No. 23.

Railway Age

With which are incorporated the Railway Review, the Railroad Gazette and the Railway Age-Gazette. Name registered in U. S. Patent Office

Vol. 116 June 3, 1944 No. 23

PUBLISHED EACH SATURDAY BY THE SIMMONS-BOARDMAN PUBLISHING CORPORATION, 1309 NOBLE STREET, PHILADELPHIA 23, PA., WITH EDITORIAL AND EXECUTIVE OFFICES AT 30 CHURCH STREET, NEW YORK 7, N. Y. AND 105 W. ADAMS STREET, CHICAGO 3, ILL.

WASHINGTON 4, D. C.: 1081 NATIONAL PRESS BUILDING. CLEVELAND 13: TERMINAL TOWER SEATTLE 1: 1033 HENRY BUILDING, SAN FRANCISCO 4: 300 MONTGOMERY STREET, ROOMS 805-806. LOS ANGELES 14: 530 WEST 6th STREET.

SAMUEL O. DUNN, CHAIRMAN. HENRY LEE, PRESIDENT. ROY V. WRIGHT, VICE-PRESIDENT AND SECRETARY. F. H. THOMPSON, E. T. HOWSON, F. C. KOCH, R. E. THAYER, H. A. MORRISON, J. G. LYNE, H. E. McCANDLESS, VICE-PRESIDENTS. J. T. DeMOTT, TREASURER.

SAMUEL O. DUNN, EDITOR. ROY V. WRIGHT, MANAGING EDITOR. ELMER T. HOWSON, WESTERN EDITOR. JAMES G. LYNE, ASS'T. TO EDITOR. C. B. PECK. ALFRED G. OEHLER. E. L. WOODWARD. J. H. DUNN. R. A. DOSTER. H. C. WILCOX. NEAL D. HOWARD. CHARLES LAYNG. GEORGE E. BOYD. WALTER J. TAFT. M. H. DICK. JOHN S. VREELAND. C. MILES BURPEE. ARTHUR J. McGINNIS. J. L. STOVER. C. B. TAVENNER. H. E. MEASON. LIBRARIAN: EDITH C. STONE. EDITORIAL ASSISTANT: BETTY KETCHUM.

RAILWAY AGE IS A MEMBER OF ASSOCIATED BUSINESS PAPERS (A. B. P.) AND AUDIT BUREAU OF CIRCULATION (A. B. C.).

SUBSCRIPTIONS, INCLUDING 52 REGULAR WEEKLY ISSUES, AND SPECIAL DAILY EDITIONS PUBLISHED FROM TIME TO TIME IN NEW YORK OR IN PLACES OTHER THAN NEW YORK, PAYABLE IN ADVANCE AND POSTAGE FREE. UNITED STATES, U. S. POSSESSIONS AND CANADA: 1 YEAR $6.00; 2 YEARS, $10.00; FOREIGN COUNTRIES, NOT INCLUDING DAILY EDITIONS: 1 YEAR, $8.00; 2 YEARS, $14.00. SINGLE COPIES, 25 CENTS EACH. H. E. McCANDLESS, CIRCULATION MANAGER, 30 CHURCH STREET, NEW YORK 7.

In This Issue

Page

Railway Bridges for the Invasion ***1058***

With a cow pasture for their classroom, Army engineering officers and men in England learn to rig derricks, handle knots and lashings and similar details before finally mastering quick bridge construction under fire.

Urges More Care with Personnel ***1060***

Since better men make better railroads, Vice-President L. W. Horning of the New York Central advocates a personnel policy incorporating scientific hiring methods and emphasizing the importance to the employee of "his" railroad's well-being. Sustained morale, opportunities for education and advancement and attractive working conditions are means to this end.

Subsidies Bring on Socialization ***1066***

The substance of what Dr. Herbert B. Dorau, professor of transportation and public utilities at New York University, told the Institute of Transportation in New York, May 23, on subsidies. "Everyone for himself and the devil take the hindmost" is still the code of business action, he believes.

EDITORIALS

Statesmanship by Transportation's Customers 1055
Private Enterprise Can Choose Its Own Destiny 1056
Concrete Forms 1056
Keep Safety Alive 1057

GENERAL ARTICLES

Railway Bridges for the Invasion 1058
Urges More Care with Personnel 1060
Reform Needed in Nation's Taxes 1063
Subsidies Bring on Socialization, by Dr. Herbert B. Dorau 1066
Two Months' Material Purchases $267,170,000 1069
Centennial of Morse Telegraph 1070
Superintendents Meet in Chicago 1072
Plywood Used in Refrigerator Cars 1075
Fire Extinguisher Uses Dry Chemical 1077
Railroad Research Proves Out 1078

RAILROADS-IN-WAR NEWS **1081**

GENERAL NEWS **1084**

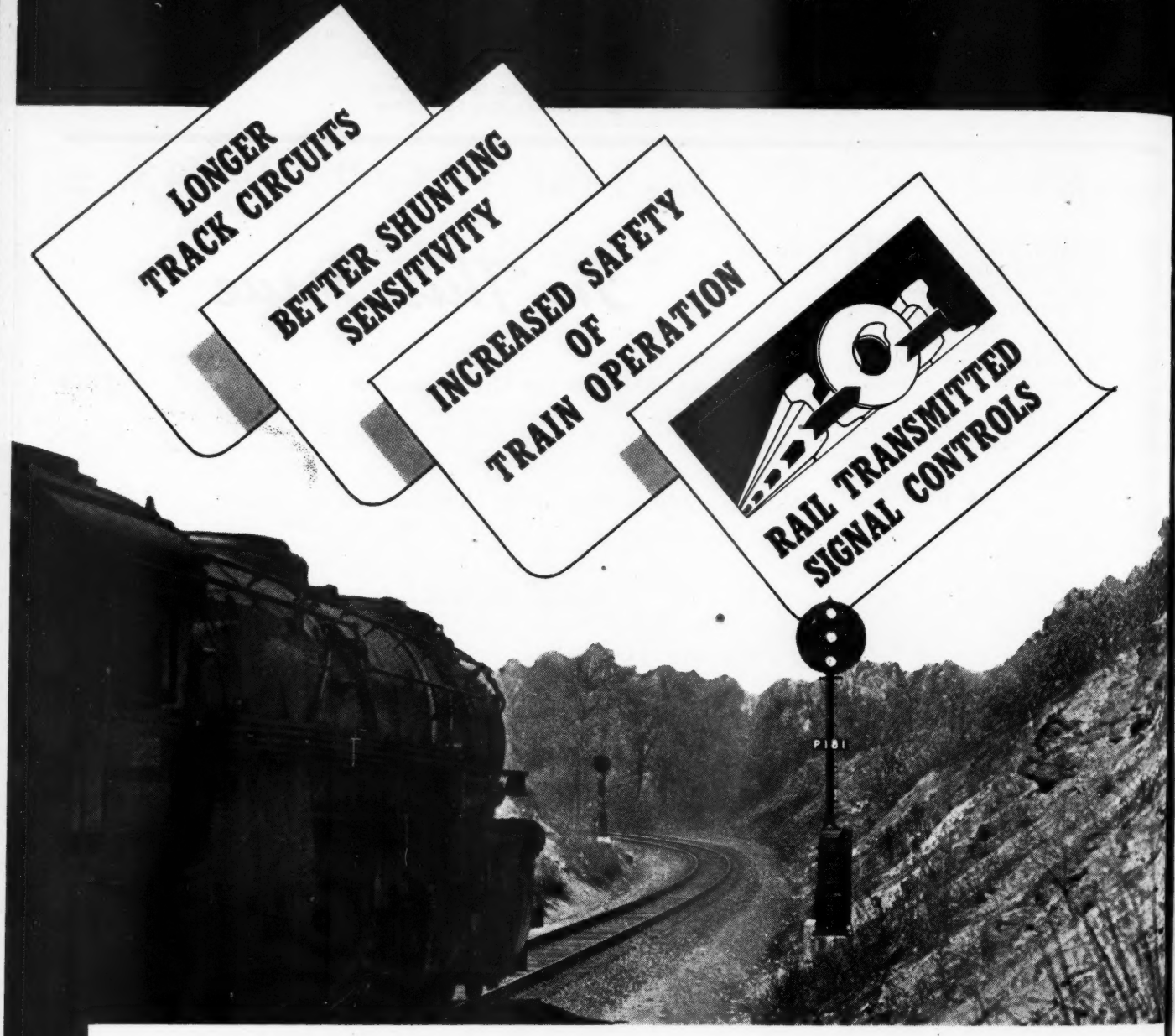
FREIGHT OPERATING STATISTICS **1099**

The Railway Age is indexed by the Industrial Arts Index and also by the Engineers Index Service

★

PRINTED IN U. S. A.

"UNION" CODED TRACK CIRCUIT CONTROL



. . . adds rail-transmitted signal controls to the usual track circuit functions!

WHILE the "Union" Coded Track Circuit may be employed for the customary purposes of detecting trains and proving the integrity of the block, greater utilization of its inherent characteristics is realized when the coded current is used also for the rail transmission of signal controls. This reduces or eliminates signal-control line wires, the maintenance of these wires, and the interruption to signal service chargeable to their failure during adverse weather. In either case, a superior degree of safety for train operation is achieved because the display of any non-restrictive signal indication depends upon the continuous operation of the code-following track relay in response to the coded energy applied to the track circuit. For complete information, see our Bulletin Number 157.

UNION SWITCH & SIGNAL COMPANY

SWISSVALE, PA.

The Week at a Glance

SUBSIDIES = SOCIALISM: There is a great deal of vocal opposition to government ownership of railroads—but much less attention to preserving the actuality, and not the mere appearance, of private enterprise in transportation. Such is the warning to American business in the address (published herein) of Herbert Dorau to last week's Transportation Institute. Dr. Dorau goes on to point out that *the shifting of costs away from direct beneficiaries of an economic service, and onto the general taxpayers, is the essence of socialization.* This shell game with costs is the principal devilry of which socialization is guilty—since, by its dishonest prices, it entices customers into choosing more expensive and less desirable things, diverting them from the less expensive and more desirable. As Dr. Dorau makes clear, the reality of socialism can be achieved under the *form* of private ownership—and that, of course, is what is going on in transportation today.

●

NOVELTY UNDER OLD NAMES: When Julius Caesar was wrecking the Roman republic and making himself dictator, he was smart enough not to choose the unpopular title of "king," which would have awakened the people's fears. Instead, he made himself absolute monarch under the disarming title of "general" (*imperator*), a designation he carried over from his military service. Thereafter, all the bloody tyrants who ruled Rome for centuries, did so under the designation of *"imperator."* Eventually, of course, this word lost its original innocence and came to signify the "imperator's" actual power, graduating at length into the modern term "emperor"—but, in the beginning, it was a word which would win confidence, rather than repel it. As Dr. Dorau points out in his address, all the successful founders of tyranny throughout the ages have understood the axiom that they must *make their changes while retaining old forms and old words.*

●

SOFT WORDS, HARD BEHAVIOR: From the foregoing, it is evident that the first absolute monarch of the United States is not likely to be a man so foolhardy and so honest as to apply the *title* of "king" or "emperor" or "fuehrer" to himself. Nor will socialism be brought on by those who candidly call themselves socialists, but rather by those who shout for "free enterprise" and belittle government ownership (i.e., exactly the behavior that so many subsidy-seeking business men have adopted toward transportation). In this connection, it is worth noting that a $500-million inland waterways bill (i.e., Simon-pure transport socialism, so long as no tolls are levied) has been voted by the Senate Commerce Committee—a group which would doubtless be as aggrieved if addressed as socialists, as Julius Caesar is supposed to have been when urged to don a royal crown.

●

NOT A PRIVATE FIGHT: Deploring the all-too-evident antagonisms prevailing among partisans of different forms of transportation, the leading editorial this week points out how unreasoning rivalry and ruthless pursuit of the short-term advantages of public subsidies may react, in the long run, to the disadvantage not only of other forms of transportation, but eventually of all transportation. The time may come, and it may not be so remote, it suggests, when the subsidized agencies may find that they have forced their unsubsidized rivals into government ownership, a form of control which usually tolerates no competition. Shippers, however, are showing a growing friendliness toward the railroads. Meanwhile there is an alternative to the socialization of the industry—i.e., placing the several agencies on an equal basis of self-support and dependence upon a marketplace test of their economy.

●

COWPASTURE CLASSROOM: American army engineer regiment officers and men in England are being put through a thorough and practical course in building bridges to prepare them for the day when they will have to replace demolished bridges on the continent in the wake of—and sometimes, perhaps, in the van of—the United Nations' invading forces. This training goes on in a bit of open country where a little river flows. It starts with the fundamentals and winds up with building a 185-ft., multiple-span bridge. As the article on page 1058 points out, these men are learning to do this work without power tools and machines, so they will not be dependent on such facilities when they are called on to display their proficiency in grim earnest.

●

MEN OR MACHINES?: The physical facilities by means of which transportation is produced are subject to constant and critical scrutiny—and Vice-President Horning of the New York Central, in a paper published in this issue, urges the same degree of attention to the men who control and operate such facilities. Once a man gets on the permanent payroll, he is likely to be around for a long time; so Mr. Horning believes that the selection of employees calls for the same scientific care as is used in making additions to plant, which will constitute charges on gross or net income for many years. Specific methods for selecting employees and training them—to their own advantage as well as that of their employer—are set forth by the author. He closes his paper by an outline of the reasons for building good-will among—and supplying more useful information about company performance to—railroad employees. Mr. Horning believes that better labor relationships, based on more adequate knowledge of the facts, are necessary for the survival of the railroads under private ownership.

●

O.P.A. NOT ABOVE I.C.C.: The Supreme Court appears pretty well to have brushed aside the O. P. A. view that it possessed, practically, a veto power on rate increases granted by the I.C.C. In the Hudson & Manhattan fare case, reported in the news pages in this issue, the Court's opinion pointed out that Congress could have thus superseded the powers of its prewar agencies but, in point of fact, did not do so; to the I.C.C. is ascribed "responsibility for maintaining an adequate system of wartime transportation."

VETERANS' JOB RIGHTS: The details of employers' obligations in reinstatement of discharged service men have been set forth in a memorandum by Selective Service, reported in the news pages herein. A veteran, to claim his right to reemployment, must have a certificate of satisfactory military service. With this document, his old employer *must* rehire him with unimpaired salary and seniority unless it is "unreasonable or impossible to do so."

●

SAVING TRUCK-MILES: Common carrier truckers operating from the San Francisco area to Portland and Seattle have been given *carte blanche* by O.D.T. to turn their traffic over to the railroads. The reason for the authorization is the necessity of curtailing non-essential truck movement, and the existence of an unbalanced traffic in this territory—empty freight cars moving in the same direction as loaded trucks.

●

A POST-WAR TAX PLAN: The wide range and comprehensiveness of the research program the railroads are pursuing in preparation for the intensified competition of the post-war period are again evidenced in a report from the committee headed by Judge Fletcher, a summary of which appears in this issue. Calling for a federal taxing policy firmly entrenched on orthodox foundations, this report pictures in such a program a basis—composed of confidence in government and of prospects of reward commensurate with risk—upon which the whole fabric of business can function at a high level of activity. It follows that the railroads not only would stand to benefit directly from any less burdensome, more encouraging scheme of corporate taxation, but that they would reflect also, in traffic and in net, its business-stimulating effect on all industry.

●

PROOF OF THE PUDDING: Further and almost overwhelming evidence of the scope and lasting continuity of railroad research came to light this week in the presentation to the so-called Kilgore committee of the Senate of data prepared by the A. A. R. in refutation of certain demagogic charges that the railroads have lost their resiliency, have blocked technological progress, and have conspired to restrict the development and application of new ideas. Here is cold comfort for those vociferous preachers of the false gospel of railroad ossification. A review of this documentary testimony begins on page 1078. Its theme is that the test of research is results—and the way in which the railroads have responded to all wartime demands for unparalleled performance is the measure of the results of their research.

●

ROCK ISLAND RADIO: The Rock Island has joined the rapidly growing list of railroads which have received experimental radio station authorization from the Federal Communications Commission. The road proposes to operate with ultra-high frequency sets, to determine their usefulness in fixed, mobile, and walkie-talkie installations.

OKOLOY
was not drafted . . .
It volunteered in 1928

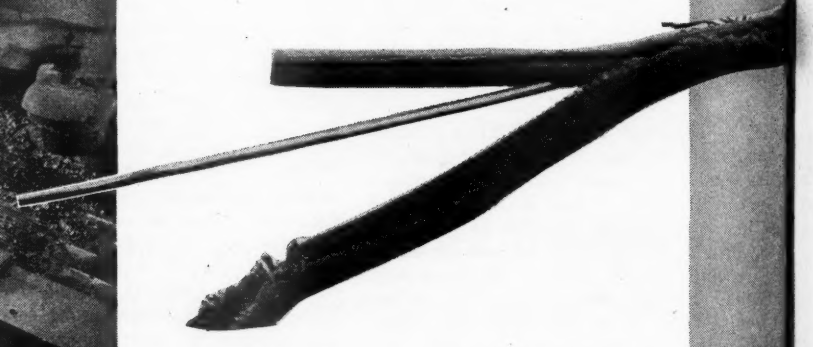
The war-caused shortage of tin forced many wire and cable manufacturers to search hurriedly for substitutes to replace the tin coating on conductors to prevent chemical reactions between the copper and rubber insulation.

In 1928, however, Okonite chemists, constantly discontent with run-of-the-mill practices, had developed and perfected Okoloy, a lead alloy coating that outlasts tin at least 2 to 1.

The old practice of "tinning" the copper conductors by passage through a bath of molten metal gave inadequate protection and too often led to failure and premature deterioration of expensive cables.

No war-forced substitute, Okoloy, for sixteen years, has been used to protect the copper conductors of all Okonite rubber insulated cables. When you specify any Okonite cable, Okoloy is just one of the "plus benefits" you obtain.

LASTING PROTECTION: After electrolytic cleaning, all Okonite copper wire passes through the Okoloy bath where, under carefully controlled temperature, the corrosion-resistant Okoloy coating is bonded to the conductor.



PROVED IN THE FIELD SINCE 1928: Section of Okoloy-coated wire removed for examination in 1941 after 13 years of service along right-of-way of a major railroad system, where it was continuously exposed to weather and to highly corrosive sulphur fumes. Note perfect condition of Okoloy coating and Okonite insulation.

THE OKONITE COMPANY, PASSAIC, NEW JERSEY

OKONITE INSULATED WIRES & CABLES

RAILWAY AGE

Statesmanship by Transportation's Customers

An important effect of the remarkable performance of the railways during the war, with the cooperation of the shippers, has been the arraying of most *users* of transportation on the side of the railways and against the railways' subsidized competitors. This was illustrated by the discussions during the recent "Institute of Transportation" in New York (reported in our last week's issue), which were carried on principally by *users* of transportation, and attained to a high level of intelligence and concern for the national welfare in the continuance of transportation as an efficient industry, under private enterprise.

All types of carriers, except two which refused the opportunity, had spokesmen on the program; but these speakers were completely overshadowed by those who spoke in behalf of the users of transportation service.

The speakers were far from unanimous, but there appeared to be rather general agreement among them on several cardinal questions, including (1) that subsidies should be avoided; (2) that there should be "co-ordination" of service by the several types of transportation; (3) that participation by one type in service by other types, under proper regulation, would be in the public interest; and (4) that private enterprise in transportation can have no assurance of continuance unless railroad credit is restored to the point where ample capital will be available from private investors.

Efficiency FOR VICTORY

None of the speakers took the view that any one type of transportation should be especially favored; and all who addressed themselves to the question agreed that government regulation of all types should be centralized in one regulatory body, so as to avoid the inevitable tendency of a separate regulatory agency to become an advocate rather than a policeman.

It is unfortunate for the country—and especially for the chances which still remain of preserving transportation under free enterprise—that the organized truckers and domestic airlines persist in the attitude typified by their refusal to participate in these sessions. Their excuse was that they did not consider the Transportation Association of America (which, together with New York University, sponsored the Institute) impartial. In fact, spokesmen for these agencies have in the past bitterly assailed the Transportation Association as a "stooge" for the railroads. The Association, however, had no spokesman on the program, nor did any of its officers preside at the sessions; and several of the speakers expressed disagreement, which went unchallenged, with its proposal for "integration." Of all carriers, the real reason for the non-participation of the airlines and the truckers was that they feared they *would receive fair treatment,* including condemnation of the subsidies they are receiving and the larger subsidies they are seeking; and this is what occurred.

The public is not going to forego the services of any of the various types of transportation. Any one of them may, nevertheless, ignore that fact and, aided by government subsidies, ruthlessly forge ahead regardless of the effect that its self-centered behavior may have on other types, in the health of which the public is also deeply concerned. Continuance in this course may very well succeed in injuring its rivals, forcing them into socialization. The final result, however, may not be especially comfortable for the ebullient youths who prefer to fight first and take counsel later.

The turmoil, chaos, and advancing socialization in the transpor-

tation industry are a disgrace and a menace to private enterprise which cannot be blamed on the politicians, who merely reflect the antagonisms among the producers and users of transportation. There is evidence (of which this "Institute" is an instance) that the intelligent public, and especially outstanding leaders among shippers, are growing weary and alarmed at the continuance of this warfare without quarter. The customer usually has his way, in the long run.

Private Enterprise Can Choose Its Own Destiny

There will be endless controversy on whether commercial highway transportation is subsidized, and if so to what extent, as long as the present wide separation is maintained between the use of the highways and the source of payments of highway costs. Such controversy does little to advance popular esteem of the transportation industry and of business in general, and it consumes energy which managerial talent might well devote to reducing costs and improving service.

As long as the controversy rages, and the magnitude and location of highway improvements continue to be entrusted to the vagaries of politics, neither the railroads nor motor transportation can look to the future with any calculable measure of confidence. Neither of them can be sure that the *status quo* of today may not disappear tomorrow. Such a condition of instability is not one to promote prosperity or confidence in private enterprise.

Leaders of some of the newer types of transportation appear still to be persuaded that they can thrive on railroad poverty. They act as though they believe fate has picked them to succeed the railroads, as the railroads succeeded the Conestoga wagon and the mule-powered barge. The instances are not analogous, however, because the railroads were prepared to supplant their predecessors completely—to take over every ton of traffic they were hauling, and to do *all* their work more economically. Neither the trucks, nor the barges, nor the airlines are similarly offering to supplant the railroads—all that any of them claims is a carefully-selected share of the freight the railroads are carrying or once carried. For economic as well as military reasons, the proliferation of newer types of transport makes possible very little shrinkage in railway fixed plant.

Since railroad service must be retained, it has to have the *means* of continued existence—namely an inflow of new capital; and painful experience has taught that the bulk of such new capital must come from the sale of stock rather than of bonds. How much new capital the railroads could raise today by sale of stock, despite current favorable earnings, is suggested by the Dow-Jones average price of about 40 such securities.

If the railroads cannot raise capital from private investors, their only recourse must be the government; and, if that happens, all the competitive advantage of their rivals from provision of fixed plant by tax funds will vanish. There will be the further danger that financing of the railways by the government may lead to government ownership. Experience in other democratic countries does not indicate that government-owned railroads would tolerate competition on equitable terms from privately-owned trucks, barges or planes. The threat to the continuance of private enterprise inherent in the shifting of payment of costs of transportation to other than immediate users, is further analyzed in an address by Dr. Herbert B. Dorau published elsewhere in this issue.

Lack of identity between the users of publicly-owned plant and payers of the costs thereof, and the resultant dangers to the continuance of private enterprise in transportation, could be easily resolved by establishing an automatic relationship between the fees and tolls paid by highway users, and further capital expenditures on such facilities (likewise with waterways and ground installations for air transport). Whether private enterprise is to disappear or be firmly re-established in transportation, is a decision which will be made by the non-railroad part of the transportation industry and the business community.

Concrete Forms

With the war demands, and particularly the crating of equipment and supplies for military purposes overseas, making such large calls on the output of common grades of dimension lumber, this material has become non-existent for all except the most necessary housing construction and for all but essential industrial construction. This means that the common grades of dimension lumber are not available for use in many types of railway buildings.

With the large majority of railway buildings being normally made of wood, the impact of this shortage on railway building construction is readily evident—a situation which is complicated by the fact that—with wood for formwork equally tight—concrete construction, a logical substitute for many types of wood construction, is being equally hampered, in spite of the fact that all of the elements of this type of construction, including reinforcing steel, are readily available.

Second-hand lumber may be available for concrete forms, as is also some exterior type plywood, where assurance is given that the plywood will be re-used to the maximum extent. But insufficient quantities of these materials are causing serious difficulties to many railway building men—in part unnecessarily, through lack of knowledge or appreciation of the fact that large quantities of removable steel forms and adjustable shores are at present available to them throughout the country, on a rental basis, for practically every class of concrete work.

A recent tabulation made by the Concrete Reinforcing

Steel Institute, Chicago, shows that such forms and shores are available from 45 companies in 50 cities in 32 states and the District of Columbia. According to this tabulation, these companies have available for rental, 949,540 sq. ft. of removable steel slab forms; 690,280 lin. ft. of removable steel column forms; 5,127,985 sq. ft. of removable steel pan forms, 20 in. wide; 2,627,693 sq. ft. of removable steel pan forms, 30 in. wide; and 1,021,435 lin. ft. of steel shoring of various types.

Where concrete construction is desirable or necessary, either in its own right or as a substitute for wood, railway building engineers—and bridge engineers as well—should not consider their situation hopeless in the face of the limited quantities of form lumber, so long as such a large revolving supply of steel formwork is available to them. In fact, it might be to their advantage in many instances, as it certainly would be to the war effort, even where lumber is available for formwork, to make full use of the metal forms available over the country, and save the lumber for other essential purposes.

Keep Safety Alive

For almost 35 years the railroads have been teaching what safe procedure is, and how to attain the minimum in personal injuries. That this effort has been very effective is shown by statistics of individual roads and by those for the carriers as a whole.

There are hazards in railway employment, but experience has shown that there is no necessity for these hazards to be translated into personal injuries. When the causes of personal injuries are analyzed, it is found that carelessness is the sole cause or the principal contributing cause of at least 90 per cent of them. Moreover, if the events that lead up to the remaining 10 per cent, in which carelessness is not so apparent, are traced to their source, it will usually be discovered that carelessness or neglect contribute to a more or less degree in them as well.

Enviable records of immunity against accidents have been established by certain gangs and certain groups of employees—a strong contrast to other groups, in which personal injuries occur frequently, though both groups are engaged in comparable or identical tasks. The reasons for this difference are not difficult to find—in the first case someone in authority is interested in the safety of the men comprising the group; in the other, there is a lack of such interest and consequent neglect to enforce the safety rules.

Conditions have changed radically in recent months. Many experienced employees have left the railways for military service or other reasons; the reservoirs from which the railways have drawn their labor heretofore have dried up; and the labor that they have been able to hire is generally inferior to that which has been lost, with respect to experience, age and physical condition. In the main, this new personnel is coming into service with no knowledge of railway practices and no background of safety instruction.

With increased traffic, and fewer cars, fewer locomotives and higher train speeds than formerly, the whole tempo of railway operation and maintenance has been increased. The fact that this has occurred at a time when every department is concerned about the quality of its personnel, should have a deep significance with respect to administration of the safety program. It indicates that efforts all along the line, from executive officers to foremen, must be redoubled. It means more intensive instruction for the new employee. It means that there must be no relaxation of the pressure to impress workmen with the importance of safety practices.

How to Assure Good Railroad Service

There is now a popular idea in some quarters that the railroads are too prosperous—at least more prosperous than any railroad ought to be. The railroads are, of course, doing better than they did in the depression years. And this is true of most lines of business. However, I hope railroad history is not about to repeat itself. Every time the railroads manage to get five or six steps ahead of the sheriff, there are always those who want to lop off the earnings and put the roads back in the bread line.

During the past three years 1941-1943, net income of the carriers has risen to an average of about $758,500,000 annually. Better earnings have enabled them to put their house in order. Bank loans and other obligations, contracted during the depression years, are being paid. Funded debt is being reduced.

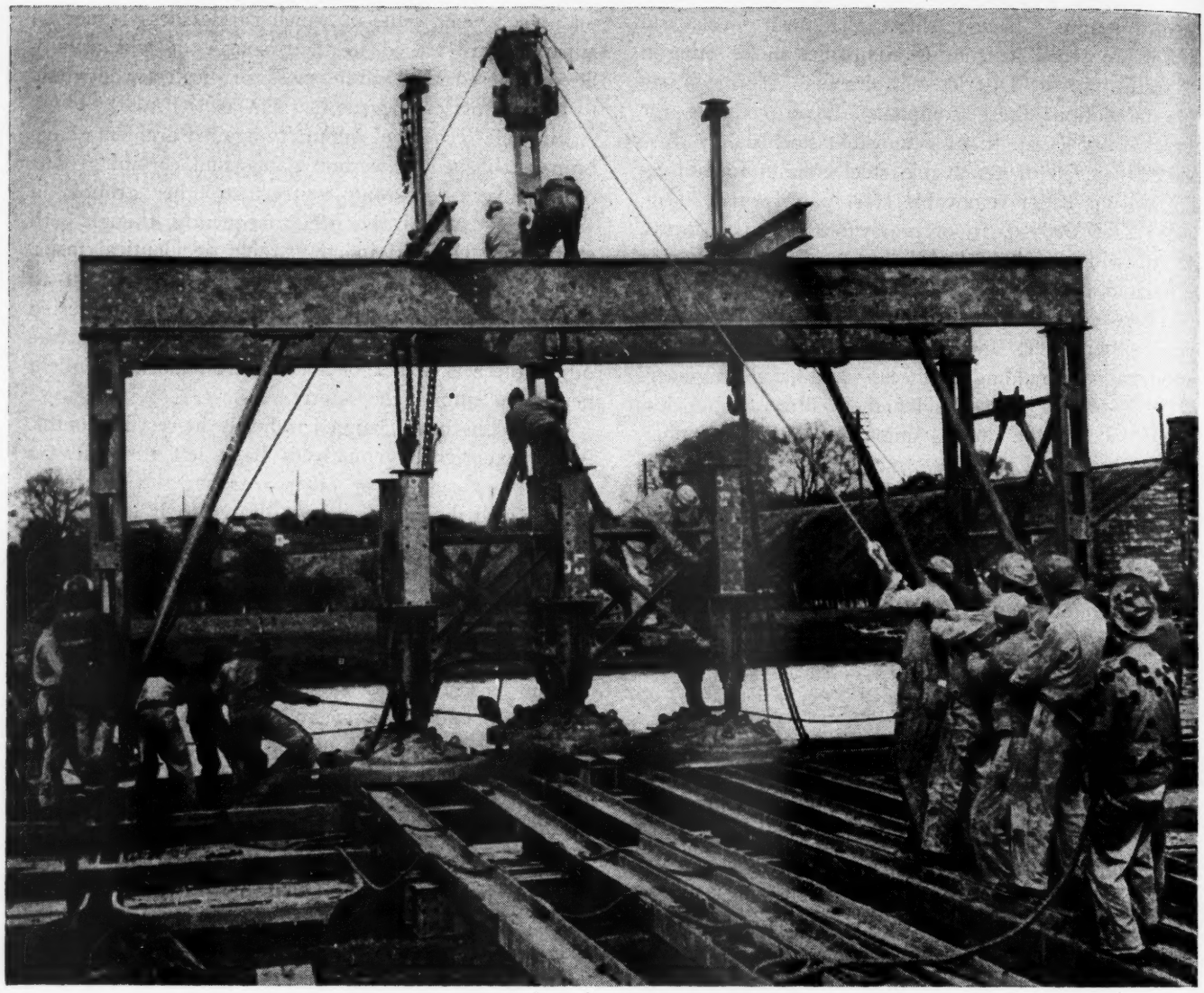
Reserves are being set aside for renewals and betterments in the post-war period. Improved credit has encouraged refunding of long-term debt at lower interest rates. Moreover, low rates and charges are being maintained in the face of rising costs of railroad operation.

When the railroads emerged from governmental control in 1920, management was criticized for not having plant, equipment and facilities that would take care of our trade and commerce. Ten years later business collapsed and management was criticized for having too much plant, too many facilities, and a surplus of equipment. In fact, there were those who insisted that one-third of the railroad plant should be junked.

But while we were trying to decide what portion of the plant could be scrapped, another ten years rolled by and management again faced the question: Are the railroads equipped to handle the traffic demands of war? For the past five years, there have been dire predictions that the railroads would fail. Nevertheless, the railroads have given a good account of themselves; they will continue to meet the test—if they are able to secure the manpower necessary.

In the past, our transportation policy has been based upon the premise that the way to cheapen service is to create more and more competition. If the newer forms of transportation did not attract private capital, we dipped into the public tax chest for the necessary funds—even when this meant the duplication of facilities which relatively few people demanded, and which nobody really needed. This is not a sound premise. A transportation agency approaches the ideal in efficiency—when it operates as nearly as possible to maximum capacity.

—From an Address by R. W. Brown, President Lehigh Valley, to Nat'l Ass'n of Mutual Savings Banks



A Set of "Camel's Foot" Pier Footings of an Invasion Bridge, Which Are Designed to Adjust Themselves Readily to the River Bottom with Minimum Settlement

Railway Bridges for the Invasion

Army school in England gives to engineering officers and men confidence they can erect railway structures over any river on the Continent

PREPARING for the day when they will be called upon to replace demolished bridges in Europe to facilitate the movement of vital United Nations' military supplies and equipment, the British and American armies in England have been conducting what are termed Army Railway Bridging Schools. The final examination for soldiers attending the American school consists of the construction of a 185-ft., multiple-span, deck-girder structure over a prescribed water course, strong enough to support moving axle loads of 20 tons. Some of the details of the operations involved in this examination are shown in the accompanying illustrations.

The American school adjoins the British army school, and each course has a student body of 80 officers and enlisted men, all of whom are selected from Service of Supply, General Service Engineer Regiments. The American faculty includes 19 officers and a number of enlisted men, all of whom were trained in the use of British tools and equipment. Furthermore, staff assistance and equipment of the British still are used by the Americans.

The classroom of the school is little more than a cow pasture through which winds a small river. Here, the soldiers first learn to rig derricks for the handling and erection of cumbersome steel girders and other heavy structural pieces. At the same time, the men are taught various types of knots and lashings, and how to set up tripods and A-frames. After they have mastered the technic of these details, they are instructed in the rigging of heavy steel derrick booms.

All of the work of the school, including the erection of the derricks and their subsequent use in erection operation, is done by hand. The purpose of this is to so equip the men that, when building bridges on the Continent, they will not be dependent upon power tools and machinery, although, on actual missions, it is understood that every available piece of machinery will be used to the fullest extent to speed operations.

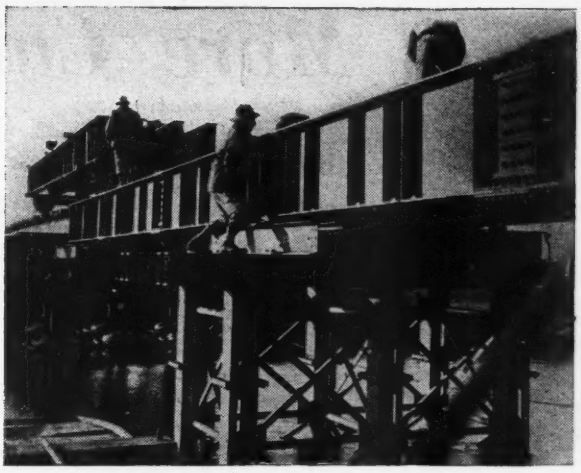
Following their basic training in the assembly and handling of rigging, the bridge construction groups are tutored in steel construction methods, during which they learn how to bolt-assemble girders, I-beams, joints and pieces of steel tubing into abutments, piers and spans. At the same time, they integrate all of the knowledge they have gained up to this point with final principles of the course, dealing with the actual erection of bridges over small water courses or dry gaps.

For their examination, the soldiers undertake the complete assembly and erection of a 185-ft., multiple-span, deck-plate girder bridge over an actual water course, deep enough to require submerged piers, and pontoon and other bridge erecting equipment.

The different spans of the bridge are built independently, directly on railroad car trucks, by means of which they are moved into position for erection. When the first span has been moved to the edge of the river, its advance end, with the aid of a derrick, is made to extend out over the water. A second derrick on the opposite bank, through a reach of its hoisting cable, gradually launches the span out over the water, while a set of tackle on the launching side checks the movement of the span and keeps it under perfect control.

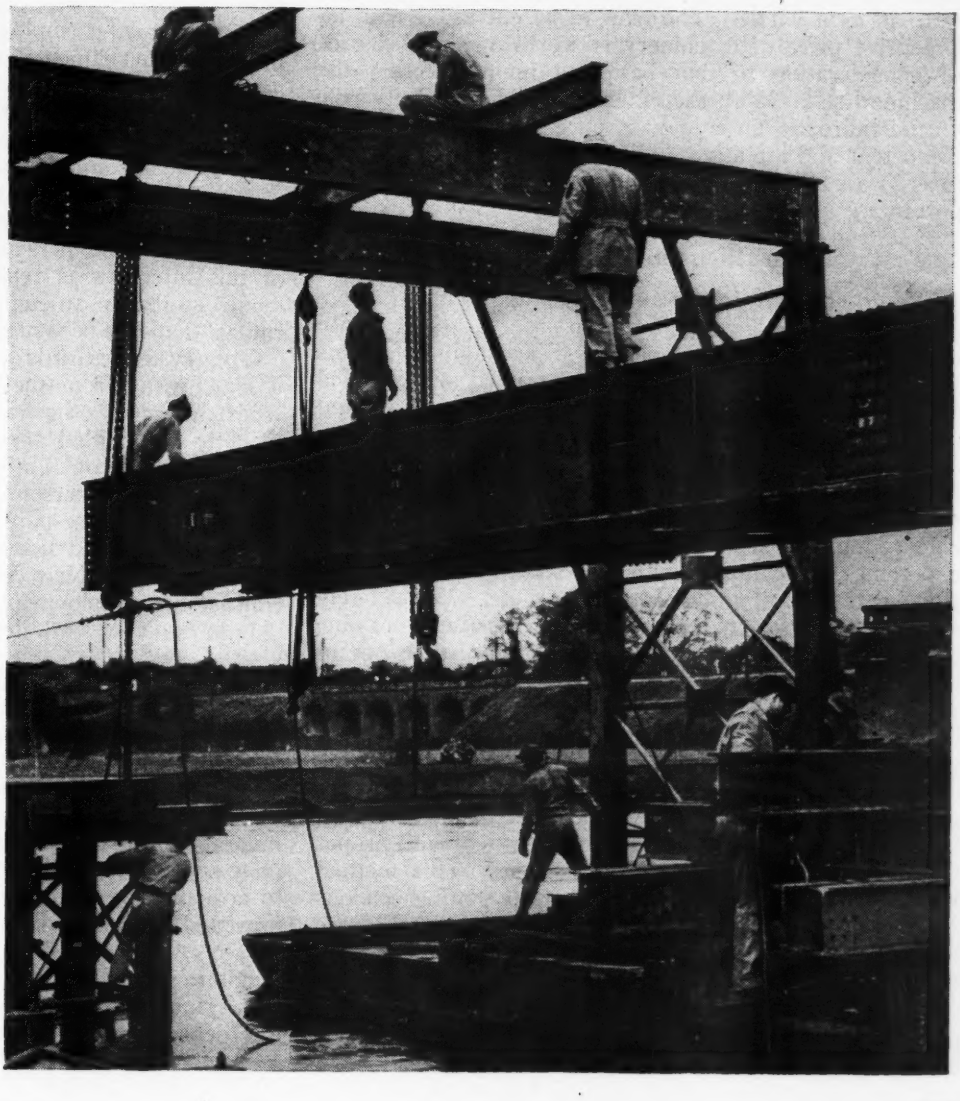
Because of their weight, the bridge piers, after assembly, are moved out to and placed in the water in two parts, one part at a time. The first part of the pier to be placed is carried out on a hoist slung under the first span while in its launching position, and from the end of that span, is set down on the river bed. A feature of this part of the pier is that it is designed to adapt itself to the contour of the river bottom with little settlement. The second, or upper, part of the pier is carried out into the river by means of an improvised gantry crane, the legs of which are set on two large pontoons braced rigidly into a unit, with lashed crossbars. In position, the second part of the pier is lowered onto and fixed to the part already submerged. The still suspended initial span of the bridge is then lowered onto and bolted to the first pier.

In more or less similar manner, the successive piers and spans are erected until the bridge as a whole is completed, and then, with equal speed and skill, the procedure is reversed and the bridge is completely dismantled. Following a short brush-up classroom course after their field work, it is said that the soldier-students are confident of their ability to erect railway bridges in the very shadow of castles on the Rhine, across the "blue Danube," or over any other river in Europe.



Completing Their "Final Examination"

NOTE.—This article is based upon an official War Department release, and the photographs are from the U. S. Army.



Launching the First Span of a Long Invasion-Type Railway Bridge

Urges More Care with Personnel

Scientific selection of new men, opportunity and training for promotion, better foremanship, are among policies advocated in this summary of May 18 N. Y. Railroad Club address by N. Y. Central's Vice-President, L. W. Horning

A RAILROAD has two components—the physical plant and the men and women who operate it. Two railroads may have similar equipment and facilities, may run between the same places, may have the same opportunity for traffic—but one will be a better railroad than the other because one has better people working on it than the other.

Since it takes better men to make a better railroad, the problem resolves itself into (1) how to select the ablest possible people for new openings, and (2) how to inspire and train present employees so they will give the best service of which they are capable.

Most departments of a railroad constantly study what new and improved machines and facilities they could profitably install. Similar attention to securing the ablest and best trained personnel would have a parallel favorable effect on departmental performance and on that of the railroad as a whole. The man to be entrusted with an expensive piece of machinery is worth an equal degree of consideration to that bestowed upon selecting the machine itself. With the extension of the seniority rule on the railroads, an employee, once hired, if he is at all competent and attentive, is likely to be a permanent fixture. Care in his initial selection, therefore, is most important.

Care in Choosing New Employees

We do not have to depend on luck or natural instinct on the part of employing officers, in order to assure choice of the most competent applicants. Techniques for this purpose are available which have proved in extended experience that they will single out the best-fitted and eliminate the misfits at the very outset. On the New York Central, in the New York metropolitan area, we have for several years selected new employees in this manner. Trained interviewers give applicants dependable ratings on such qualities as enthusiasm, skill and experience, education, health, appearance, ability to get along with others, ambition, aptitude, etc. We can rely upon the ratings given by interviewers because, from time to time, applicants are interviewed by more than one of them; and agreement between the ratings given an individual by different interviewers indicates that the method is scientific—not swayed by whims, prejudices, or guesses on the part of the interviewers.

This method of selection will not provide geniuses as employees; but, out of a given number of applicants, it will select those strongest in the traits which, with proper training, will make them good workers. This method largely absolves us from the danger of getting obvious misfits onto our seniority lists. It is not only intelligence that we are looking for, of course, but also a willingness to work. Railroading is no business for a lazy man.

It is our usual policy, when vacancies occur, to promote present employees to higher-paid positions and to use new employees on lower-rated jobs. The better-qualified our new entrants are, the more quickly they master their duties and the more quickly present employees may be released for promotion. Our plan fosters the interests of present employees further, since we welcome applications from them for jobs more attractive than those they hold. If ratings by interviewers indicate that present employees are qualified for promotion or transfer, they are given that opportunity—rather than using the newer employees on the better jobs.

Department Heads Retain Hiring Prerogative

Under this centralized method of selecting employees, the manager of the employing department has not lost the prerogative of final decision on who should be hired—a power which should not be taken away from him so long as he is responsible for the department's performance. However, applicants for positions—whether they come first to the employing department itself or to the personnel department—are required to be interviewed and rated in the personnel department. If the departmental manager asks the assistance of the personnel department in securing employees, we send several qualified people to him and he makes his selection from among them. If the departmental manager selects an employee on his own initiative, the employee still is interviewed and rated in the personnel department, and the result of this interview is reported to the employing department—so that, if an employee is hired despite an adverse rating, that fact becomes a matter of record.

This system affords an answer to nepotism—because it takes away from the employing officer any criticism which he might otherwise suffer from denying employment to unqualified persons favored by those to whom refusal of a favor is not easy. At the same time, the judgment of the personnel department is not substituted for that of the responsible departmental head—his is still the deciding voice on who should be hired or rejected. On the New York Central we have thus centralized our employment in greater or less degree, not only in the New York area, but also at 10 other points.

"Orienting" and Educating the New Employee

The best-qualified employee having been hired, the next important step is to give him the proper introduction to his job. There are two phases to this introduction, both equally important: (1) making the employee favorably acquainted with his associates and his company and (2) training him for his new work. Information to acquaint the employee with his surroundings may be imparted verbally, to a considerable degree, by the employee's supervisor—but we believe that such an introduction should include also an "employee manual" answering all pertinent questions about the organization, interdepartmental relations, policies, etc. We are now preparing such a manual.

The training of new employees for their work, of course, varies with the nature of their jobs. We give ticket clerks and employees for reservation and information bureaus "pre-induction" training before they come on the job. We operate several schools for training telegraphers and telephoners. The Illinois Central has an interesting school at Carbondale, Ill., where boys under military age are trained for engine and train service. Railroad schools for the training of firemen, brakemen and switchmen have been established at St. Louis and Chicago with the co-operation of the War Manpower Commission, which has likewise joined with the railroads in organizing classes for telegraphers and rate clerks at several other points. Several thousand of our employees have taken "job instructor training" through arrangements with the "Training Within Industry" division of the War Manpower Commission. The purpose of this instruction is to teach present employees how to impart most effectively what they know to new employees.

Opportunities for Present Employees

Having attended to the selection, introduction and initial training of new employees, an equal obligation rests on the employer to train present employees for the better performance of their current duties, and for advancement. Moving a man up the ladder merely by routine operation of the seniority system is not adequate. A brakeman does not automatically become a conductor simply by calling him such and giving him a conductor's pay. A machinist will not necessarily perform the functions of a foreman just because he is given the title and pay of that position. He has many things to learn, and several thousand of our New York Central foremen, gang leaders, and other supervisors have been given "foremanship training." In a number of cases this training has been offered through educational institutions which receive funds for that purpose from governmental agencies. In one instance several hundred of our foremen took a course sponsored by the National Foremen's Institute.

Foreman Should Be "in on" Management

A foreman should be a real leader—one who exerts a wholesome influence upon the lives of the men he supervises. He should be able to inspire men and bring out the best in them. He should be able to recognize good performance, because the employee is entitled to know when he goes home at the end of the day that he has done a good day's work; if he has failed, his foreman, in a skillful and sympathetic way, should tell him when and where and how he has failed. The foreman should know safe practices, how to conserve tools and materials. He should know how to plan his work and how to apply discipline, which should neither be lax nor harsh.

The foreman should be treated unmistakably as part of management, for he is a vital part of it—actually the only part with whom most employees come into intimate daily contact. If the foreman does not know the policies of his company—if he is left in the dark on important decisions—it will be impossible to expect that employees in the ranks will understand and appreciate the wisdom of these policies.

We have also established classes in office management for our employees through arrangements with Manhattan University; likewise for instruction in traffic and transportation control, advanced accounting procedures, the proper firing of locomotives, and fuel conservation. Almost 200 of our employees are learning stenography and business machine operation at classes conducted in a New York high school. Others are studying public speaking. Hundreds of them, on their own initiative but with our enthusiastic approval, think enough of their future to have enrolled in correspondence courses with the Railway Educational Bureau of Omaha. The railroads were among the first to adopt the apprentice system of training mechanical employees. Some railroads, including our own, supplement on-job training of apprentices by class-room instruction.

How to Deal with the Public

Some months ago it occurred to me that the railroads had a war-time opportunity to make friends of the thousands of people who are riding and shipping by rail, some of them for the first time—customers who may perhaps stick with the railroads in the post-war period if they learn now to like us. In co-operation with the New York State Department of Education, therefore, we devised a course in public relations training, and already more than 2,000 of our employees have taken this course. This instruction aims to teach us, first, how to get along among ourselves, with the thought that a discordant family can't make a good impression on its neighbors; second, this course instructs its students in relations with the public—and how to recognize and deflect erroneous opinions and propaganda inimical to the industry. Facts and figures of the industry are made known, so that students may discuss the company's business intelligently; and learn to regard it as "my railroad." Several other railroads have started training programs in public relations and kindred subjects. I hope it may spread to every railroad from one end of the land to the other. The theme of our public relations training is "considerate behavior toward others," expressed by the initials C. B. T. O.—the dictionary definition of courtesy.

Avoiding all complexities, favorable personnel and

The Goal and How to Attain It

Mr. Horning sees three persuasive reasons for making conditions of employment attractive:

(1) To improve the efficiency of the employee by maintaining and strengthening his morale,

(2) To make the desirable impression on the public which only a "happy family" can effectively arouse, and

(3) To awaken the employee's awareness of the identity between his own and his company's well-being—to the end that he will support policies favorable to the continuance of transportation under a regime of private enterprise.

As means to the above ends, the author not only emphasizes surroundings conducive to an agreeable job, but also care in hiring and ample opportunities for education and advancement. Central to his entire thesis is insistence on the focal importance of foremen and other supervisory officers. No managerial policy, however enlightened, can strike employees in any light more favorable than that which supervisors are capable of reflecting.

labor relations consist in *an employer liking his employees, and employees liking their employer.* Where such mutual regard is lacking—or exists only in limited degree—a beginning must be made; and here is one place where there are no limitations on managerial initiative. If an officer with employees under his charge does not actually like them, he can at least, by an act of will, decide to treat them as if he liked them; and regard for them will follow his considerate behavior. Psychology demonstrates that a parent likes his children because he does things for them—the liking follows acting that way; and after real regard arises, the rest of the problem becomes much simpler.

Factors in Employee Morale

Good personnel practices follow this feeling of regard. Such practices build morale, and morale is as important to successful railroading as it is to successful military operations. The morale of the individual employee is high or low depending primarily upon his enthusiasm for his job, his respect for the leadership to which he reports, and his feeling of security for the future. Among many factors which affect the morale of the railroad employee, the more important include the following:

Job security (employment stabilization); compensation; opportunity for advancement; reasonable methods of handling grievances; convenient working hours; vacations; training of employees; training of supervisors (to assure competence which employees will be led to respect); eating, lodging, rest and toilet facilities; social and recreational opportunities.

A management which begins with the premises that friendly employee relations and high morale are necessities to successful railroading under modern conditions, and which agrees that such relations are a natural outgrowth of a mutual liking and regard between management and employees, will understand that regard by management for employees can be real only if shown in concrete form.

How far is management willing to go in taking favorable action on the many specific steps by which it can give positive evidence to employees of its intelligent consideration for them?

By a friendly attitude to employees, I do not mean being sentimental; or relaxing discipline; or surrendering necessary managerial prerogatives. Laxness does not build morale, but weakens it. It is an act of injustice to the energetic and conscientious employee, if unmerited tenderness is shown to the habitually inattentive and listless. Reasonable and just discipline wins the understanding support of employees who are endeavoring to do their duty. Where diligence is generously recognized, the diligent are not likely to be unwarrantably sympathetic to the careless and inattentive.

Information Which Employees Need

The many things we may do to make railroading a more satisfying job for employees will, however, largely fail to bring effective results, unless employees understand what management is striving to accomplish; and what some of its difficulties are. One important step in the direction of greater employee understanding is the preparation of a company report, in terms comprehensible to the employee. A number of railroads and other industries have in recent years been issuing such reports—and the New York Central has joined their number. In distributing this report the company has enclosed a post card upon which the employee's comment and criticism are solicited. By thus securing suggestions, we hope to adapt this report to suit the needs of employees—that is, to produce the type of report which will answer the employee's own prescription of an effective source of information.

Wage-Earners' Stake in Free Enterprise

Free private enterprise on the railroads and in business generally cannot be assured of indefinite continuance unless people who work for wages can be brought to an understanding of the advantages which this system of property ownership and management holds out for their well-being and progress; and especially unless they can be brought to realize the necessity of a "living wage" for invested capital.

How many railroad employees know that it is they—and not invested capital—who get by far the greater part of the money which customers pay for railroad service; and that the monetary loss to employees from adversity to the railroad industry is greater than to security-holders? Under present conditions of maximum utilization of railroad plant, it takes almost $20,000 of invested capital for every job the railroads are able to offer; and in normal times this requirement is about $25,000. Capital is constantly being worn out and must be constantly replenished, for the railroads to continue to provide jobs; it can only be replenished adequately if the railroad industry can offer a degree of safety, and a certainty of earnings at least equal to those which the investor is able to secure in other places where he may invest his savings.

Failing this confidence in the railroads on the part of investors, one of two things must happen to the railroad industry—either of them highly inimical to the welfare of the railroad employee: (1) the industry may gradually wither, and its job-opportunities fade away (as also its ability to finance continued generous pension payments); (2) the industry may be socialized, with the government as employer—with the loss to employees of the great advantages which they have gained through collective bargaining. A government does not bargain about wages and working conditions; it prescribes them.

Employees Have the Most to Lose

A great deal depends, therefore, on bringing the intelligence and good-will of railroad employees to bear on this condition. Their continued well-being—as well as that of railway owners and creditors, the shipping public and the country generally—requires that they be given the information and desire to act upon it. Intelligent understanding by employees of these facts is a prerequisite to the full comprehension of them by the general public. A regulated industry prospers or is impoverished, depending upon whether governmental policy toward it is founded on truth or error. Under a system of popular government, governmental policy can seldom act wisely if the voters who control it are misinformed.

The railroads have no serious rivals from a technological or economic standpoint for the bulk of their business. Their troubles lie wholly in the field of public understanding and political relationships, and the first step toward correcting these troubles lies in removing unnecessary causes for misunderstanding between the companies and their employees. Attention to this situation is, thus, one of the most important of management's duties; such attention cannot reasonably be considered secondary to the claims made on managerial attention by the physical side of railroading.

Reform Needed in Nation's Taxes

Railroads' research committee says postwar socialism is inevitable unless private capital is encouraged by sound federal fiscal policies to provide all a chance to work

WASHINGTON, D. C.

SPECIFIC and uncompromising recommendations for a national postwar fiscal policy are embodied in the latest report issued by the Railroad Committee for the Study of Transportation, that of its subcommittee on taxation. Taking as its theme the doctrine that "the fundamentals of our free and democratic economy" must be preserved in order to "avert the threat of government ownership of the instruments of production," the report sets forth a tax program designed to foster business stability at a level high enough to assure "employment opportunities for all who are capable of gainful occupation"—the only course, it suggests, by which "our traditional system of private enterprise" can be preserved and state socialism avoided.

Entitled "Some Recommendations for a National Postwar Fiscal Policy," this 22-page closely-printed document is one of the fruits of the forward-looking research undertaken by the industry under the sponsorship of the Association of American Railroads. The scope and organization of this research, centered in the committee of which A.A.R. Vice-President R. V. Fletcher is the chairman, have been reviewed in *Railway Age* from time to time, most recently in the issue of May 20.

How to Restore Necessary Confidence

The recommendations of the Subcommittee on Taxation are predicated on the conviction that the preservation in this country of a democratic form of government depends upon a "restoration of public confidence" in its financial integrity and its economic stability. Terming the "present conflict" between supporters of the "insidious doctrine that there is nothing dangerous about a big national debt" and upholders of the older principle that the public debt should be liquidated as quickly as possible "the foremost economic issue of the present time," the report asserts that confidence in the country's solvency and some promise of reward to private capital commensurate with the risks of private business must be developed in order to resolve that issue favorably to the preservation of the existing economy. Because the national fiscal and tax structure must be revamped before any unified plans for dealing with other major problems of our domestic postwar reconstruction can be formulated, the subcommittee says, a tax program to produce "maximum revenues consistent with the continuation of our system of private enterprise" is essential. This report outlines its idea of that program.

The chairman of the Subcommittee on Taxation is Karl Fischer, assistant to the president of the Chicago, Burlington & Quincy. Other members are: J. B. Angell, real estate and tax commissioner of the Chicago, Rock Island & Pacific; R. C. Beckett, general attorney of the Illinois Central; G. T. Carmichael, vice-president and comptroller of the New York, New Haven & Hartford; R. L. Ettenger, Jr., finance and taxation assistant of the A.A.R.; W. T. Faricy, general counsel of the Chicago & North Western; H. W. Johnson, vice-president and comptroller of the Burlington; Haddon Johnson, tax commissioner of the Southern; J. C. Kauffman, general solicitor of the Chesapeake & Ohio; R. J. Lehman, general attorney and commerce counsel of the Atchison, Topeka & Santa Fe; R. C. Miller, comptroller of the Pennsylvania; and D. H. Worrall, tax commissioner of the Pennsylvania.

This subcommittee's chart for a postwar course toward encouragement of private business and away from dependence on the government for the funds required for capital investment and production consists of nine basic recommendations, each of which is discussed in some detail. The first of these proposals is that the budget must be balanced and suitable provision made for payment of the public debt.

Foreseeing that "the very people who have professed no concern" about the unprecedented proportions of the government's debt up to now will, after the war, "claim that it is so great that it cannot, or should not, be discharged," the subcommittee points out that the only alternatives are "repudiation or its less horrifying but equally obnoxious counterpart, inflation." Meanwhile, they show, the further expenditure, after the war, of billions of dollars for "various public projects to provide employment and comprehensive social security" is seriously advocated, while proponents of such expenditure not only suggest "practically nothing" in the way of liquidation of the public debt, but even contend that, since we "owe it to ourselves," it actually is not a liability.

The "only possible justification" of this startling and menacing theory, the report continues, "rests in the principles of collectivism." Unless it is conceded that "the people of this country are going to give up their birthright of private property" and adopt this theory of collectivist principles—which concession the committee finds itself "wholly unable" to make—the national debt is a liability that must be discharged. If the debt at the end of the war is $250 billion to $300 billion, then an annual expenditure of $9 billion will be required for debt service and retirement, even with amortization on the basis of one per cent annually. Assuming that $20 billion yearly is the practical maximum of federal revenues, even with high national income accompanying "prosperity," and assuming further that $6 billion will be required each year to maintain the military and naval establishment, only $5 billion will be available, the subcommittee estimates, for all other federal government activities.

Less Paternalistic Supervision

The strict economy that must be imposed in order to live within such a budget, says the report, "will not find favor with those who have been the beneficiaries of the government's prodigality. . . . Probably this policy of 'living within its means' will require that the federal government give up some of its paternalistic supervision and control of economic activities and some of its grandiose plans of social security and world-wide re-

form. But . . . we still have 48 sovereign states capable of at least some measure of government, and . . . undoubtedly capable of taking over some of the functions now performed by the federal government. . . . The sphere of activity of the federal government must be restricted, rather than enlarged, in the postwar period. Any other course will invite national disaster."

The report then undertakes to show how the estimated requirement of $20 billion annual federal revenues can be collected. This part of the study proceeds on the assumption that $15 billion should be raised through taxation of income—to which the federal government would have exclusive rights—and the rest through death and gift taxes, excises and miscellaneous sources, including perhaps a tax on "interstate sales." Here is developed its second recommendation—that our present federal tax system must be "basically revised," because it "violates every principle of sound taxation."

Calls for Higher Normal Personal Income Tax

Our present "almost unbelievably bad" tax system, the subcommittee asserts, does *not* raise adequate revenues, is *not* equitable, is *not* simple or even understandable, is *not* certain in its application, and is *not* capable of economic administration. Moreover, it adds, in "recent years" it has been used unjustifiably "as an instrumentality for the advancement of social reforms through attempted redistribution of wealth, for coercion and consequent subjugation of the states, and for attempted control of natural economic forces. The net effect . . . has been the well-nigh complete frustration of the ordinary economic forces and consequent disruption of our traditional system of pivate enterprise."

Seven proposals are then outlined for changes in federal tax legislation designed to bring about a tax system positively related to the basic requirements to which the present system is, in the subcommittee's opinion, completely unresponsive. Of these seven proposals the first is that normal tax rates on individual incomes should be increased and personal exemptions should be lowered or abolished. In order that maximum revenues from income taxes may be realized, the report says, "our system of taxation must be such as to foster and encourage the employment of capital in risk enterprises and to stimulate, rather than discourage, maximum business activity." These ends can be brought about, it insists, only if the tax burden on corporations and their stockholders is reduced, and this can be done, in turn, only if greater aggregate revenues are collected from taxes on personal incomes. "There is only one way by which adequate revenues can be secured from the personal income tax to meet our postwar budget requirements, and that is by a complete revision and revamping of the statute in order to secure a broad coverage of all the people and all the national income."

The subcommittee would impose a normal personal income tax of 20 to 25 per cent, at the same time lowering personal exemptions substantially, though some concessions would be provided for incomes totaling less than $2,000. It would continue the withholding procedure, extending it, if practicable, to other sources of income, and providing for "full satisfaction of tax liability at the source by persons in the lower income groups." On the other hand, it would "substantially" reduce personal surtaxes, since it subscribes to the view that present surtax rates "approach complete confiscation in the higher brackets," and "tend to defeat their purpose because they have long since reached the point of diminishing returns."

Developing its argument that "the greatest threat to the continuance of private enterprise in the postwar era lies in its possible inability to provide maximum employment opportunities," the report remarks that, "in order to provide employment for all who are willing and able to work in the postwar era, there must necessarily be an expansion of the instruments of production together with a restoration of existing plants to peacetime activities. This will require a large investment of capital, and if private funds are not available for that purpose, there will be an irresistible demand that the government take over these instruments of production. This movement would probably encompass not only transportation and the public utilities, but even the larger industrial plants, and possibly all forms of private enterprise." Because it believes that "the present excessive surtaxes" are "drying up" the sources of the bulk of private funds for this essential expansion of production, the subcommittee insists that the surtax rates must be lowered, even though it concedes that the "principle of progression" in proportion to ability to pay "is entirely in keeping with equitable considerations."

Perhaps the greatest inequity in our present tax system, the report goes on to say, is double taxation of corporate income, and its next proposal for a postwar reconstruction of that system is that "corporate income should be taxed but once and at the same rate as the normal tax applicable to individuals." There is no justification, it insists, for taxing dividends directly and indirectly at rates higher than those imposed on earnings of individuals or partnerships, yet that is the result of imposing a federal corporate income tax that averages 70 per cent before the dividends are distributed, and then taxing the dividend at whatever rate the individual stockholder pays. "The inevitable result of this discrimination is to discourage investments in corporate enterprise," it concludes, and it "also penalizes corporate financing by sale of capital stock," because corporate taxes are calculated after interest payments but before dividends.

Would Tax All Income at Same Rate

In discussing the proposal that the income tax on corporations be entirely abolished, in recognition of its discriminatory characteristics, the subcommittee is inclined to adhere to the doctrine that considerations of equity require that "all corporate income" must be taxed, whether distributed to the stockholders or not, and not to the view that the country should subsidize corporate savings to the extent of allowing undistributed earnings to go untaxed. In other countries, and formerly in this country, it points out, some form of escape from double income taxation has been provided for dividends. The most appropriate remedy for the present unjust treatment of corporate income, it suggests, would be application of the same rate of taxation to it as to private income. This proposal contemplates that dividends would be exempt from the normal tax on individual incomes. Improper accumulations of surplus are already subject to penalties, so that no substantial problem would develop from efforts to withhold corporate profits from stockholders, the report indicates.

While this corporate income tax proposal may result in some loss of revenue to the government, the subcommittee remarks, there will be compensating advantages, because the existing law works to deter the realization of income that otherwise would be available for taxation. "A high level of business activity accompanied by relatively low tax rates is infinitely to be preferred," it goes on to say, "to a low level of business activity accompanied by high tax rates."

Further proposals for revising corporation tax laws as soon as the war ends include the repeal of the corporate surtax, the excess-profits tax, the capital stock tax, and the declared-value excess-profits tax, the latter two being, the subcommittee argues, properly within the area of state, rather than federal, taxation. The corporate surtax, so called, is not a true surtax at all, it points out, but a tax on the interest derived from certain government bonds, that is, "an artful means of circumventing the government's contractual limitation," to which frank and open repudiation of the contractual obligation would, it suggests, be preferable.

However attractive it may be in principle, "it is doubtful whether any tax designed to recapture excess profits can be devised which will not violate all the canons of equity, simplicity, economy, and certainty," the report asserts. "The fundamental objection to this tax, as in the case of the normal tax on corporations, is that it treats the corporation as the ultimate taxpayer, ignoring the fact that a corporation is nothing but an association of stockholders and that the tax is really borne by them. . . . Since the purpose of the excess-profits tax is to siphon off all unusual profits resulting from war activities, it is to be presumed" that it will end with the war.

Another section of the report deals with the bases upon which excess-profits taxes are calculated, stressing the view that "the railroads are most seriously affected and prejudiced by the failure of the current statute to give adequate consideration to present investment or present worth," the result being that "reasonable normal profits" may become subject to the excess-profits tax under conditions where the corporation is wholly dependent on the invested capital method of computing this tax. Because "no other industry has such a large capital investment" and because, for reasons beyond their control, the railroads' recent (pre-war) earnings basis has been unreasonably low, they, more than most corporations, suffer from a method of taxation based on "considerations of expediency rather than fairness," it is argued further.

The treatment of capital gains and losses for tax purposes is characterized as inconsistent and unfair. During 30 years' experience with this tax, says the report, "we have tried every conceivable method of treating capital gains and losses, save only the ignoring of such gains and losses altogether," which method, it suggests, would have left us a "happier and more contented people" without the Treasury being any worse off. If the tax on capital gains is to be continued, it insists, "we should at least be sufficiently consistent and fair to accord equal treatment to capital losses. In other words, if capital gains are to be taxed in full, capital losses should be allowed in full as deductions from other income," and any arbitrary formula that may be applied to the one should be applied equally to the other.

Tax Laws Not to Enforce Social Reforms

Not only should the character of federal taxation be altered, in the postwar period, along the lines outlined, the subcommittee says, but the tax laws must be "purged of their complexity and uncertainty. . . . In order to restore a measure of intelligibility and certainty to the tax laws a major operation is required. We must remove the causes rather than merely attempt to alleviate their ill effects. . . . We must resolve that henceforth the tax laws will be adapted for their prime purpose of producing the revenues required for the support of the government and that considerations of economic and social reform will not be permitted to interfere with this purpose."

Several of the proposals made by the subcommittee to bring about simplification of taxation procedure closely parallel the plan for the simplification of the personal income tax just passed by Congress, as a footnote to the report points out. Going beyond the field of personal taxation, however, the principle is applied with equal effectiveness to the taxation of corporations, where, the subcommittee explains, "regulations have become so complicated that mere words no longer suffice for their exposition, and resort must be had to other vehicles such as mathematical symbols and algebraic formulae to express the Treasury Department's interpretation of the statute. . . . Nowadays the preparation of these [corporate tax] returns requires the collaboration of lawyers, accountants, economists, and statisticians, and even after all of them have contributed their bit, there can be no assurance that the returns have been properly prepared, because no one can really understand them."

Retroactive Tax Measures Barred

Uncertainties can be eliminated largely by giving "only prospective effect" to future revenue legislation, the report points out, with retroactivity barred. Simplification can be brought about, it adds, when income tax rates are reduced to "some point within the zone of reasonableness," when the capital gains tax, excess-profits tax and "the many nuisance taxes" are eliminated, and when the tax laws are restored "to the status of revenue measures," eliminating "considerations of social and economic reform." There will be less occasion for provisions for relief from inequitable conditions then, it asserts, and there will be fewer "loop holes" for Congress to attempt to stop. "We are convinced," says the subcommittee, "that there is no necessary conflict between simplicity, certainty, and substantial equality under a revenue statute except when it is employed for purposes ulterior to the raising of revenues."

The final recommendation in the report deals with elimination of "overlapping and competing taxation of the same source of revenue by federal and state governments. The subcommittee's solution of this problem would reserve to the federal government exclusive rights to the taxation of income, which, it says, has "become the very cornerstone of the federal revenue system." In addition, death taxes and tobacco and alcoholic beverage excises would be left to the federal government. On the other hand, the retail sales tax, except as to interstate sales, would be left to the states, for a majority of which it already is the chief source of revenue, according to the report, and it suggests that a uniform rate be established in all states, which the federal tax on interstate sales would match. The states would have exclusive taxing rights in the motor vehicle, gasoline, and stock transfer fields, under this plan, and abolition of federal excise taxes on cosmetics, jewelry, and the like would come with the end of the war.

Finally, the subcommittee would do away with the federal pay roll taxes for unemployment compensation, leaving this field of revenue exclusively to the states also.

"We believe that the control exercised by the federal government . . . in the Social Security Act is offensive to the sovereignty of the states and that this system, in its implications, constitutes a threat to their very existence," the subcommittee says. "The states should be given sole and exclusive rights in the field of unemployment compensation taxes, and they should be freed from the present paternalistic supervision of the federal government."

Subsidies Bring on Socialization

"The use of the favor and finances of government by one industry to advance itself in competitive struggles with another is the kiss of death for private enterprise."

By Dr. Herbert B. Dorau

DURING the last quarter century the people of this country have become increasingly preoccupied with the distribution of their wealth and income and alarmingly unconcerned about increased production. **We have taken to scalping each other rather than devoting ourselves to producing more of the goods and services which make for a higher level of well-being.** All of this has not been without its impact on transportation enterprise.

Even the necessities of war have not corrected this misemphasis. Although we have given a dramatic demonstration of the possibilities of a full production which, if carried over into peace time, would result in such a volume of goods and services as to mock all previous conceptions of a high standard of material well-being—yet there is not an issue of domestic political policy which does not reflect the carefully calculated bias of economic class conflict.

Socialization a Means of Camouflaging Costs

Socialization is one of the more cultivated, camouflaged and surreptitious means employed to accomplish the economic scalping of one class by another. It is a means of obscuring the true cost of goods and services, **a device for making it appear that goods and services cost less than they actually cost,** and in general, a hocus pocus by which the people as a whole are misled into thinking that they are getting something for nothing. By discriminatory taxation, on the other hand, the cost of some things is made to appear greater than it actually is.

It is probably true that social progress at all times has been measurable by the extent to which the achievements of the few have been shared by the many, but the "phony" gains apparently achieved by the method of socialization must be clearly distinguished from the real social dividends made possible by the successive and large reductions in the actual social cost of desired goods and services. They are as different as night and day, as different as a stock dividend which but redivides, and the real thing—income which will buy a loaf of bread. Actual social gains from improved efficiency and increased economy are not excusably confused with the gross make-believe gains which are offset somewhere else in the economic system by an equal or larger loss. Policies depending on this sort of social "check-kiting" may work for a while, and on a small scale, but eventually there will be a slip-up in this robbing of Peter to pay Paul; and then Paul can't be subsidized any more because Peter has given up the economic ghost.

Socialized transport probably means government ownership to most people, and obviously government ownership is one of the most common means of socialization, but the full implication and true nature of socialization as the favorite political legerdemain of our times can be appreciated only if it is understood that, (1) socialization may and does proceed without government ownership or operation, and (2) that government ownership and operation do not of necessity mean socialization of the goods or services produced. When the import of this distinction dawns, it will be understood that socialization is the more important, the far more pervasive, as well as the less easily detected and resisted, means of departure from a system of private responsibility and freedom of economic choice.

We have illustrations of both forms of public transport operations in the metropolitan New York area. Subway transportation is socialized—has, in fact, been socialized under both private and public operation. On the other hand, we can here pay our respects to the management of a great public transport facility, the Port of New York Authority, which has paid its own way and successfully resisted efforts to socialize its operations.

Government Ownership Without Socialization

It is high time that those who fear for the future of the traditional American system of private enterprise, free themselves of the fixation which the bogey of government ownership is to so many, and become aware of the fact that the ends of socialization are being achieved under many other forms and in many other ways. Also, when and if it is realized that government ownership is not necessarily synonymous with socialization, we can free ourselves of stupid resistance to government ownership where and when the totality of circumstances make it the only alternative, and apply the same energy and attention to seeing to it that unnecessary socialization does not occur under government ownership when it becomes the unavoidable form of economic organization and administration.

If, under government ownership, socialization could be prevented, much of the socialist fervor for public ownership would disappear. On the other hand, much opposition to the assumption of certain public functions would also disappear if the people were assured that public ownership and operation were not being sought and were not going to be used as a means of socialization of the cost of the service.

Socialization of Transport Is Far Advanced

Government ownership as such is no longer the *sine qua non* of socialism. In the step by step American trek toward communism, the favorite method is socialization under old forms and traditions. We have, as yet, but little government ownership in the transport industries in this country, but the socialization of transport has gone a very long way already and may proceed much further before it takes the form of government ownership on a large scale. It is not necessarily a foregone conclusion **that extensive government ownership *in form*** will be the eventual outcome of increased government interference in the economic life of the people.

The art of politico-economic revolutionizing has developed remarkably in recent years. The method of indi-

NOTE—Dr. Dorau is professor of transportation and public utilities at New York University. This article is the substance (with headings and emphasis added) of his address at the Institute of Transportation on May 23 (see *Railway Age*, May 27, page 1024).

rection has been substituted for the straightforward proposals of the original Socialist Party. The purposeful managers of our transition from the horse and buggy era, in which we thought that cost and income should stand in a respectable relation to each other, to the planned economy, in which cost is an afterthought, do not confuse means and ends. Their aims and ends are clear but the means are alternate. Government ownership is no longer an end—it is a means, the real end is socialization. In more recent political practice the highest respect has been shown for the old axiom of statesmanship which the successful founders of tyranny have understood and acted upon in all ages, namely, that **"great changes can best be brought about under old forms."** Strong resistance to public ownership may prove to be but an easily bypassed bastion in the line of defense against communism —one which will easily fall after the major and more vulnerable objectives have been achieved.

How Business Men Aid Socialization

The true nature of socialization is, therefore, no longer merely an academic question—although those who had most at stake have unfortunately often treated it as such; and, as a result, we are well on our way, and on the time schedule of the assault on the system of private enterprise and individual responsibility. It is already "much later than you think." In fact, so effectively have depressions and wars served as false fires and diversions, that there is little public realization how far we have been following fellow-travelers as guides in the social and economic evolution during our times.

There is no fixed pattern and no simple mark of identification by which socialization can easily be recognized. The business man is, therefore, often confused. Often also he lends the movement his support, particularly when the proposal appears advantageous to his particular business—and even if only so in the short run. In fact, cupidity among business men, as among other citizens, seems to be the elementary basis for distinction between desirable socialization and undesirable socialization. **The onward rush of socialization seems for so few to be a matter of principle or a question of the common good in the long run, but simply a question of whose ox is gored now.** It certainly behooves the business men who fear the rising momentum of the drift toward a socialized society, to acquaint themselves with its characteristics and manifestations so as to be able to recognize the substance, whatever the form, and to forego the opportunities of selfish gain and special advantage when the opportunity happens to come their way. Otherwise businesses, one by one, will fall before the temptation to fatten at the public expense, not realizing that what is doled out with the right hand must be recovered out of the pockets of others with the left, with a fat commission for the service of taking and giving.

The business mind, not trained in the tricks of the semantic shell game by which old "isms" are sold under new names, is peculiarly handicapped in discerning its own and the public's long term interest. Effective resistance to the onward march of socialization has not been forthcoming because men, in their own interest, and citizens generally, in the common interest, have not been able to recognize the substance of socialization in the forms in which it appears; have been scanning the skies on the watch for a cataclysmic change while the rising tide slowly engulfs them.

After the substantial socialization of enterprise, it will prove to be a relatively simple matter to eliminate the shell, according to the best of Marxian prescriptions. Only by a critical awareness as to the essential nature and character of the devices of socialization can those who view such ultimate changes in the character of our economic organization with alarm, defend the traditional American system of economic freedom.

What, if any, are the discernible earmarks and identifying features of socialization? Socialization is not a one-front or two-front attack. Its manifestations are numerous and its variations endless; and that is probably the explanation of its siren appeal on one point or another to almost every industry. It is amazing to one who stands somewhat aside, if not aloof, to note the substantial lack of cohesiveness of business in a common resistance to the relentless reduction of the area of economic freedom. The explanation can not be only the ordinary apathy of persons intensely concerned with their most immediate problems, but also the fact that **each step forward in the socialization of one industry affords some promise of special advantage to other industrial groups.** "Everyone for himself and the devil take the hindmost" remains the code of business action. To the business mind there are two kinds of socialization—that which threatens to affect me unfavorably and that which affects the other fellow—and the latter is of little concern to me and may indeed have some short-term favorable by-products. The use of the favor and finances of government by one industry to advance itself in the indirect competitive struggles with another is the kiss of death for individual initiative and private enterprise.

One circumstance, in my opinion, is always present in any scheme or form of socialization. That is a departure, to a greater or lesser degree, from the responsibility of meeting the full cost that stands in the way of making the land of promises come true. Cost is the awkward unyielding fact that makes it impossible to bring the economic dream-world into reality. Those who promise miracles ultimately feel the pressure to deliver or to appear to deliver. The active engineers of socialization—knowing as well if not better than we do that cost can only be reduced by improved efficiency and increased economy; that total cost will have to be covered by total revenue; and that there is after all no magic in coal fired into a government-owned boiler or a higher B.t.u. value in oil from a government-subsidized pipe line—know also that some method must be found for getting out of the dilemma. The answer is socialization in its broadest sense and the means for its effective employment is now at hand in the form of the unlimited spending power of Congress—unlimited as to amount and purpose.

"The Essence of Socialization Is Subsidy"

The essence of socialization is subsidy. The purpose of subsidy is to avoid the restraining discipline of cost on the character and amount of goods and services produced. Since all would admit that the total cost of all goods and services must be covered by total revenue or price, we can easily see that **socialization is a means of making us pay the cost of some goods in the price of other goods and balancing out with a tax payment which it is wholly impossible to trace or allocate to any particular goods or service.** It is a means for making us think some things are relatively cheap and other things are relatively expensive. As a means of economic obfuscation, the theory of socialization is nearly perfect and its practice affords almost unlimited opportunity for political plundering of industry. This can, moreover, be accomplished with particular ease if one segment of industry allows itself to be played off against others until our entire economic system is shot through with subsidy and counter-subsidy and we are all subsidizing and being subsidized until no one knows, no one

can find out, and possibly no one will any more care, whether the goods and services we want are the ones we are getting, or whether our limited resources of materials and labor are being directed to the production of the relative amounts of the goods we want most.

We have probably made clear why government ownership as a form of enterprise organization is so popular in some quarters. The appeal of government ownership is certainly not as an end but because of its usefulness as a means of avoiding the stubborn fact of cost. The greatest attraction in government ownership is its availability as a means of socializing goods and services by not recognizing their full cost of production, i.e., as a means of making certain goods and services appear to cost less than they actually cost and, by taxation if necessary, making all socialized goods and services appear to cost less than they actually do. Government ownership serves as a heavy curtain that can conveniently and effectively be drawn between the to-be-seen and the not-to-be-seen costs.

Witness, for example, the almost desperate efforts of the sponsors of publicly-owned utility operations to avoid responsibility for the full cost of the service so as to make a favorable comparison as to rates charged. You may in that connection recall the testimony of a director of a large federally-financed electric undertaking in answer to the question: "Do you include interest on the investment in calculating your cost?"—to the effect that interest was not included because no interest was *paid* (the United States Treasury paid the interest).

Private enterprise, in contrast, must respect its most critical and severe master, the cost for which the consumer is willing to reimburse the producer. Private enterprise is under considerable pressure to try to remain solvent, to balance cost and income. Intelligent private enterprise attempts to recover its costs from the purchasers of its products in such a manner as to interfere the least with the widest possible use of those products and services which can be made to pay their way, i.e., to meet cost but let cost interfere as little as possible with the widest range of social and economic service.

An honest price system is an indispensable requisite to the successful and continued operation of a system of free enterprise, for the heart of a system of free enterprise is the freedom of choice among consumers as to how their claim on the social income shall be met. **Prices which do not reflect the present comparative cost of goods and services available to the consumers are economically dishonest prices because they mislead consumption** and destroy the ability of prices to function as the guide posts or quotation boards of the economic system—directing consumption to the more available goods and away from the less available, more costly.

Socialization in Its Least-Attractive Form

The true social concern about the effects of socialization is not really with the comparative merits of the scalped or "scalpor" or the ethics of legalized robbery, but with the effect of the destruction of a price system which operates to achieve the largest overall economy; and the substitution therefor of prices which have no meaning as reflectors of comparative social cost. From the long-term public point of view, I should view public operation of essential services on a business basis of meeting all costs, with less alarm than a widespread system of subsidies and counter-subsidies of private enterprise in form—with all the government interference which such a partnership brings. There is, however, little probability that we shall have such an option, for government ownership without socialization of cost will evoke little enthusiasm and keep very little support; and the ultimate outcome of extended socialization of cost under private ownership in form, will, no doubt, eventually be an extension of the area of public ownership and operation. Socialization of transport is a particularly significant aspect of the general trend away from a free economy in this country. In some sense all economic activity is interdependent, but upon no industry is all other industry so substantially and continuously dependent as on the transportation industries. Therefore, what happens to transportation is not only important to that industrial group, but to all business and to all industry. No other industry is of the pervasive and intense significance of transportation.

This audience does not need to be told of the significance of the cost of transportation to industry and business in general, or of the even greater significance of stable and non-discriminatory rate structures; and probably also understands that a less-than-perfect old rate structure, to which business location and markets have adjusted themselves, may be better than the perfection of a change which disrupts relationships of long standing on which the value of large past expenditures depends. All of that simply means that the socialization of the cost of transportation, by whatever means achieved, can have more significant and far-reaching results than similar developments in any other industry. We are all aware of the great sensitivity of industry in general to charges in the form of relative transportation costs—and therefore realize that relatively minor changes in the real cost of transportation can have large-scale economic repercussions in general industry.

The very dependency of industry on transport calls attention to the possibilities of economic regimentation through socialization, with or without government ownership, of the agencies of transportation. **Now that we have a firmly established monopoly of credit in the federal government, all that remains to perfect the machinery of general industrial regimentation, is a monopoly of transportation.**

Government Does Not Tolerate Competition

Socialization in transport, or any of the major means of transport, leads readily to transportation monopoly. As long as there is private ownership in theory and in fact, public policy resists integration, even demonstrably desirable and economic integration, but when government interest in any agency of transport becomes proprietory the attitude seems to change. Assume for instance, government ownership, actual or in effect, of the railroad industry. How long might the other agencies of transport expect to enjoy the freedom of competition with a government-owned railway? I know of no country in which government-owned agencies are willing to face the competition of alternative modes of transport often indeed, even private transport is restrained and restricted in favor of a government monopoly.

Some post-mortems of the tragic fall of France find contributory responsibility in the lack of mobility of French forces due to the favoritism shown the politically-owned railways of France and the consequent underdevelopment of flexible highway transportation.

Governments like gods are jealous. Government ownership of one means of transport is most likely followed by government ownership of all competitive public means of transport, or the imposition of such restraints and controls as will amount to the same thing.

I am not unaware that as of this time and at this stage in the development of our American economy we are facing facts—many of them as resistant to change and as

stubborn as the ultimate total cost of the goods and services which men live by. The transportation problems of this country are the well-imbedded residue of an already lengthening history. There is a wide difference between what should be done, could we take a fresh start, and what can be done, given all the facts and accumulated residue of history that require recognition by a society that respects its own past and has regard for the continuity and thus the integrity of its social processes. Social evolution rarely reverses itself except in very long cycles. What we have today, we must largely live with tomorrow. The battle must be fought on the ever-evolving front, for the extent to which we can or may want to undo the past is necessarily limited. Just because it is so difficult to undo the accomplished facts of the past, it behooves a complex society to avoid enslaving itself by short-sighted, ill-advised social adventure in the field of politico-economic expediency.

The moral of my story is: **Those industries which, with the benefit of socialized cost, undermine the independence and integrity of their competitors so that government ownership comes per force of necessity, are arranging for their own early demise as private entities in an economic society of free enterprise.**

It is an old adage of political economy, "where government moves in, enterprise moves out." No business can compete with governments of unlimited spending power and no industry can long or effectively compete with industries operating with the benefit of socialized cost.

Two Months' Material Purchases $267,170,000

RAILWAY purchases of fuel, materials and supplies by Class I roads during the first two months of 1944 increased 33 per cent over the same period of last year, and aggregated $267,170,000 compared with $200,345,000 during the 1943 period, according to estimates prepared by *Railway Age* and based upon individual reports received from 87 carriers.

Excluding fuel, Class I railways spent 39 per cent more for materials received from manufacturers during January and February of this year than during the same period in 1943. Total purchases, including rails, crossties and all other material, amounted to $165,452,000, or an average expenditure of approximately $2¾ million per day, compared with $118,922,000 or $2 million per day during the first two months of 1943.

As a whole, the railways received approximately 31 per cent more rails during the first two months of 1944 than during the same period of last year. The Southwestern region received 27.7 per cent of the total and 9 per cent more than in the same period of 1943. The Southern region received 23.8 per cent of the two-month total and an increase of 53 per cent over receipts of the comparable period last year. The Northwestern region received 12.9 per cent of the rails received by all regions during January-February, 1944, and 71 per cent more than in the same period of 1943. The Southwestern region received 11.8 per cent and 9 per cent more than last year; the Great Lakes region obtained 11 per cent of the total received and 11 per cent less than in 1943; the Central Eastern region received 8.9 per cent this year or one-third more than last year; 2.5 per cent of the first two months' total went to the Pocahontas region, or 10 per cent less than 1943 receipts for the similar period, and while the New England region this year obtained about twice the amount received during the first two months of 1943, it aggregated less than 1.5 per cent of the rails received by all the railways of the country during the first 60 days of 1944.

Crosstie expenditures increased from $8,740,000 for the first two months of 1943 to $13,958,000 for the same period this year, an increase of 60 per cent. However, this does not mean that current production is following any such trend for, unlike many other commodities, there are several distinct factors involved in the consideration of railway expenditures for crossties. In the case of steel rails, the price has remained stationary since 1939 and the results of increased allocations are apparent in the greater deliveries during the first two months of this year. On the other hand expenditures for crossties permit no such direct comparison between the amount spent and the number of units that are ready for insertion in track. In some instances, current expenditures represent the purchase of green ties which must undergo prolonged seasoning and subsequent preservative treatment prior to insertion in track. In other cases expenditures represent the purchase of treated ties that are ready for immediate replacement purposes. Hence an increase of 60 per cent in crosstie expenditures involves many complex factors, including increased unit costs, treating and handling costs. Moreover, it does not necessarily mean that the roads will have enough replacement ties to take care of insertions under new rails. Average placements during the last three years have been less than 50 million ties per year. Now, with a substantially larger rail-laying program well under way, and by reason of the manpower problems at treating plants, it will be difficult to get enough ties on the ground to take care of the new rails and ordinary tie replacements as well.

The increase of 38 per cent in expenditures for all other materials, including materials and supplies for the maintenance of cars, locomotives, roadway and structures, reflects in large measure the relaxation of many governmental restrictions on railway materials. Also, the fact that 68 per cent more new freight cars and 64 per cent more new locomotives were placed in railway service during the first quarter of 1944 than in the same period of 1943 makes it apparent that railway material and equipment requirements are now receiving greater consideration by the government war agencies.

Expenditures for fuel climbed to $101,718,000 in the first two months of this year, compared with $81,424,000 in the same period of 1943, a 25.5 per cent increase.

Railway Purchases—Class I Roads

	1944* (000)	1943 (000)	1942 (000)	1941 (000)	1940 (000)
Miscellaneous Materials and Supplies					
January	71,022	51,147	69,060	45,457	45,593
February	69,332	50,531	63,216	43,467	39,939
2 Months	140,354	101,678	132,276	88,924	85,532
Rails					
January	5,625	4,471	3,075	3,464	3,529
February	5,515	4,033	3,817	5,297	4,815
2 Months	11,140	8,504	6,892	8,761	8,344
Cross Ties					
January	6,990	4,118	4,895	3,472	4,128
February	6,968	4,622	4,837	3,514	3,928
2 Months	13,958	8,740	9,732	6,986	8,056
Fuel					
January	50,859	39,882	32,803	27,261	24,977
February	50,859	41,542	31,945	27,901	24,219
2 Months	101,718	81,424	64,748	55,162	49,196
Total Material and Supplies					
January	134,496	99,618	109,833	79,654	78,227
February	132,674	100,728	103,815	80,179	72,901
Total	267,170	200,346	213,648	159,833	151,128

* Subject to revision

Centennial of Morse Telegraph

Railroads play central role in commemoration of the event, just as they did at the inception of the invention

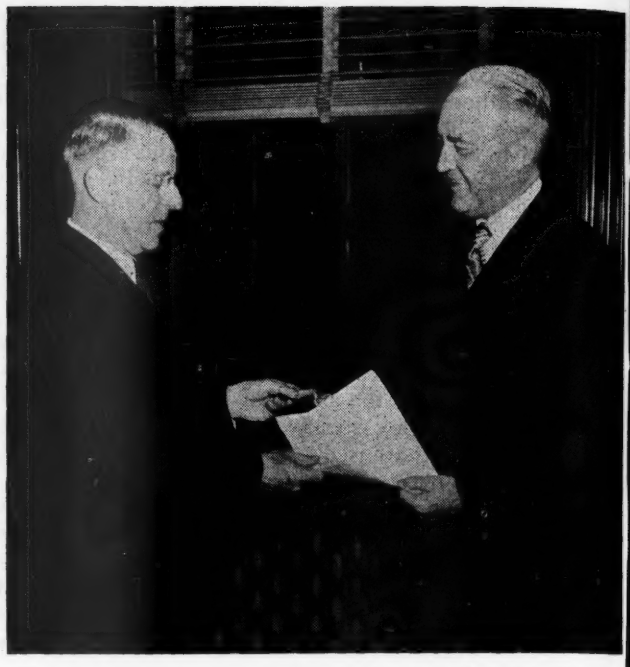
ON May 24, the centennial of the Morse telegraph was celebrated in Washington, D. C., and Baltimore, Md., by reenacting the scene of May 24, 1844, when the first message, "What Hath God Wrought," was sent by telegraph between the Chamber of the Supreme Court in the Capitol at Washington, and an office in the Baltimore & Ohio station in Baltimore. E. E. Norris, president of the Southern, was at the key on May 24, when the sending of the message to Baltimore was reenacted; and the message was received by R. B. White, president of the Baltimore & Ohio, and formerly president of the Western Union Telegraph Company. Six former telegraphers, who are now senators or congressmen, also sent messages, as was briefly noted in last week's *Railway Age*.

The ceremonies at Baltimore included the unveiling of a commemorative plaque at the Mt. Clare station of the B. & O., and an exhibit of historical and modern rolling stock there. A "Liberty" ship was also launched at the Baltimore shipyards, christened "Samuel F. B. Morse" by Leila Livingston Morse, his granddaughter.

On the evening of May 24, a dinner was held at the Hotel Statler, Washington, which was presided over by A. N. Williams, president of the Western Union Telegraph Company. Mr. Williams read a message from President Roosevelt, which stated:

Instrument Over Which First Message Was Sent

"The invention of the telegraph gave to all mankind the means with which to conquer space and time in the transmission of information from one corner of the globe to another. During the century which followed, electrical communication has served to bring all of the peoples of the world increasingly close to each other."



President R. B. White, Baltimore & Ohio (former president Western Union Telegraph), Buys the First Sheet of Telegraph Centennial Commemorative Stamps

Jesse H. Jones, secretary of commerce; James L. Fly, chairman, Federal Communications Commission; Major General Harry C. Ingles, chief of the Army Signal Corps; and Rear Admiral Joseph R. Redman, chief of Navy communications, outlined the part that the telegraph and electrical communication in general have played in war and peacetime pursuits.

Railroad Assisted in Telegraph's Inception

President White, of the Baltimore & Ohio, spoke as follows at the dinner:

"Most of you know that Samuel F. B. Morse, the inventor of the telegraph, never had sufficient funds of his own to perfect his invention or prove its worth. The father of his intimate friend, Alfred Vail, advanced enough to enable him to make working models, but Morse had to struggle for about five years with Congress before the $30,000 grant was made to enable him to make a convincing demonstration. Even with this sizable sum assured, it was not enough to buy a right-of-way for the wire line. The B. & O. was then the only railroad running into Washington. Morse had frequently ridden over it and knew that it was an ideal right-of-way for his circuits.

"Fortunately its president, Louis McLane, was a man of wide experience in world affairs. Previous to becoming president of the B. & O., he had been United States Minister to England, Secretary of State and also Secretary of the Treasury. When Morse asked for the franchise, McLane urged his board of directors to grant it, and this was done, with proper provisions to safeguard the railroad and give it the privilege of free communication over the line so long as it did not interfere with commercial telegraph business. The B. & O. also co-operated in other ways, such as the granting of travel rights on its trains for Morse and his workers, at low rates.

"With Ezra Cornell, later founder of Cornell University, helping him with the engineering, Morse started laying his line from Baltimore. The first method was to put the telegraph wire in a lead pipe and lay it in a trench 20 in. deep and 2 in. wide. The trench was dug with a plow especially built at the Mt. Clare shop of the B. & O. in Baltimore, and the plow was hauled by 20 oxen. Nines miles out from Baltimore at the old horse car Relay House of the B. & O. where Morse and some of his com-

panions were quartered, the insulation of the wires failed and Morse found that he would have to adopt the overhead wire system. So, instead of being buried in the roadbed of the B. & O., the wires were strung along its right of way over which they carried the prophetic first message, 'What Hath God Wrought!'

"The somewhat coincidental co-operation of the 'magnetic telegraph line,' as the Washington-Baltimore line was then called, and of the B. & O., developed by force of circumstances and logic into perhaps the closest tie-up ever made by any two great industries. For from the precedent established in 1844 grew the historic co-ordination of telegraph and railroad. It was a happy circumstance. Each industry complements the other and strengthens it. For many years the railroads handled a large part of the telegraph's commercial operation. Thousands of railroad employees have also worked at the same time for the telegraph.

"The B. & O. was identified importantly with the telegraph in another way. In the early Eighties the Baltimore & Ohio Telegraph Company, which was owned by this railroad, had about 50,000 miles of land line, and owned lines running from Boston in the east to Galveston in the southwest, with interlacing lines covering a large part of the United States east of the Rockies. This vast network later became an important part of the lines comprising the system now operated by the Western Union Telegraph Company. Other railroads also had extensive ownership of the commercial telegraph companies. Gradually the railroads gave up the commercial telegraph business, but to this day the historic paralleling of the railroad by the first telegraph line is followed over thousands of miles of railroad in this country, which, incidentally, possesses about two-thirds of all the telegraph lines in the world.

"During the Century of the Telegraph, the railroads have provided a fertile field for research and technical development in the art of electric communication. In fact, the whole system of railroad operation as we know it today was developed around the telegraph, where it continues to function importantly in the movement of traffic.

"Hand in hand, the telegraph and the railroads have come down through the last century, and judging from present day indications, the railroads will continue to be a prime proving ground for new developments in communications. For the basis of good railroad operation is information, and the basis of good information is speedy communication."

Samuel Finley Breese Morse

Samuel Finley Breese Morse, the inventor of the Morse telegraph, was born at Charlestown, Mass., on April 27, 1791. By the time he was 14 years of age, Morse was quite an accomplished artist, and while at Yale, he helped support himself by painting portraits of faculty members and students. During his college course, he studied such limited information as was then available concerning electricity. Upon graduation from Yale in 1810, he went to England to study art, returning in 1816. One of his most famous works is a full-length painting of General Lafayette, which hangs in the New York City Hall.

In 1829, Morse went to Europe to continue his art studies. While in France, he noticed the Chappe's semaphore system of communication, in which semaphore arms were set at various angles to denote words. Messages were thus transmitted from one tower to another on clear days.

While returning from France on the packet Sully in October, 1832, Morse heard Dr. Charles T. Jackson of Boston, Mass., discuss new discoveries in electro-magnetism. The electro-magnet had recently been discovered by Joseph Henry at Albany, N. Y., and Dr. Jackson, explaining this to the travelers, said, "It consists of a piece of iron bent in the shape of a horseshoe and wound with wire. When an electric current is sent through the wire, the magnet will pick up a small bar of iron. Electricity travels instantly through the entire length of wire, and causes the magnet to act."

Morse, already thinking in terms of communication, is reported to have commented to the effect that "If the presence of electricity can be made visible in any part of the circuit, I see no reason why intelligence may not be transmitted instantaneously by electricity." His drawings and notes on this subject, made that night in his artist sketch book, have been preserved and are in the National Museum in Washington, D. C.

In 1835, Morse began work as professor of the Literature of Arts of Design of New York University, for which he received no salary but collected fees from his students, and was provided with quarters. During the winter of 1835-36, he built his first telegraph equipment, including sending and receiving instruments. By September, 1837, Morse had developed his idea and instruments sufficiently to conduct a demonstration over 1,700 ft. of wire in a room at New York University.

One of his friends, Alfred Vail, persuaded his father, Stephen Vail, to advance $2,000, and the use of machine shop facilities to build a set of telegraph instruments of sound design and workmanship. Three miles of wire was run around the factory at Morristown, N. J., and on January 6, 1838, the equipment operated successfully in a test to transmit the message "A patient waiter is no loser." Other demonstrations were made in New York and Philadelphia. A test including 10 miles of wire strung around a room in the capitol at Washington, was made in the presence of President Martin Van Buren and members of his cabinet. A bill introduced in Congress in 1838 for an appropriation for the construction of an experimental line between cities, failed to pass. Financed by a third partner, F. O. J. Smith, Mr. Morse took his telegraph to Europe but no foreign government would construct an extensive test. After returning to the United States, he went to Washington. Finally in 1843, a bill was passed to appropriate $30,000 to build an experimental line between Washington and Baltimore.

Louis McLane, president of the Baltimore & Ohio, a railroad then 16 years old, saw the possibilities of the telegraph as an aid in railroad operation, and granted Morse permission to use the railroad right-of-way for the construction of the new telegraph line between Washington and Baltimore. The original plan was to use insulated wire laid underground by a special plow designed by Ezra Cornell, a man who later became prominent in the telegraph field and was founder of Cornell University. Because of defects in the insulation on the wire, the underground construction was abandoned in favor of line wires on poles. The work progressed, and by the time of the Whig convention in Baltimore, May 1, 1844, the line was completed from Washington to Annapolis Junction, 22 miles. Washington was awaiting the news of the Whig presidential nomination. Delegates returning from Baltimore were bringing the news by train. When they arrived at Annapolis Junction, Vail got the news of Henry Clay's nomination for President and flashed it to Washington over the new telegraph line. Then newspapers began giving the telegraph favorable comment so that by the time of the opening of the entire Washington-Baltimore line, on May 24, this publicity had established the event as the big news of the day.

First Telegraph Office

As the government had sponsored the construction of the line, Congress also granted permission for establishment of the first Washington telegraph office in a government building and Morse set up his instruments in the Capitol. The other end of the line was established in the railroad station of the Baltimore & Ohio in Baltimore, and Vail was in charge there.

(*Continued on page 1074*)

Superintendents Meet in Chicago

Extended discussion of manpower problems and training new employees—Counsel from shippers and Car Service Division

PART II

THE problems presented to the superintendent as the result of the shortage of manpower were given full and detailed attention at the "national staff meeting" of the American Association of Railroad Superintendents at the Stevens hotel in Chicago on May 9-11. A committee report and several addresses, as well as extended discussion, were devoted to this subject. W. C. Barrett, chief of personnel, Lehigh Valley, was chairman of the committee which reported on current developments in recruiting and training employees. The report of this committee outlined the employment situation, particularly in the "critical areas" and described the various steps whereby the War Manpower Commission, the Railroad Retirement Board and the U. S. Employment Service have endeavored to work out some plan for employment stabilization and the avoidance of waste of available manpower. How the railways recruit employees was described, as well as the employment of women, of Mexicans, the "upgrading" of employees and other phases of the problem. Another section of the report dealt with the experience of various governmental and railway agencies established for the training of new employees.

Addresses on Manpower Situation

F. M. Wilson, assistant chairman, Western Association of Railway Executives, spoke on what the railways face in securing adequate operating personnel. Mr. Wilson dealt with the difficulties of applying to the railways, with their far-flung operations, the rules and restrictions intended for war production plants situated solely in one place. He said:

"The W. M. C., while recognizing that the Chicago labor market owes some obligation to supply railroad labor for use on lines between here and other large railway labor employing centers, has not been able to devise an acceptable formula to permit the railroads to take people out of this employment area. We maintain that restrictions to prevent railroad labor hired in the Chicago area from being used outside of the area is comparable to saying that one of the war plants in Chicago cannot hire people in this area for employment on the third floor of its plant."

Mr. Wilson also discussed occupational deferments under the selective service system; the probable sources of labor supply; the use of Japanese evacuees in areas other than the Pacific Coast; and employment of high school boys and returning war veterans.

J. P. Kiley, assistant general manager, C. M. St. P. & P., discussed methods of reducing labor turnover, stating that while, before the war, this problem was largely confined to maintenance and extra gangs, it has now affected many other departments as well. He said:

"From January to December, 1942, we increased the number of employees by about 1,400—from 30,679 to 32,167. During that period we hired 26,980 new employees, so that, if we eliminate the 1,400 additional employees that we hired, our turnover was over 80 per cent. In 1943, the number of employees increased 3,300, or from 32,423 to 35,753 and, if these are deducted from the 40,539 new employees hired, our turnover amounted to 110 per cent. In the 12 months ended May 1, 1944, we hired 509 brakemen and the turnover was slightly more than two per cent per month. For firemen, the turnover was about 2.4 per cent per month; for switchmen about 2 per cent; and for telegraphers about 1 per cent. When it is considered that the average turnover for all employees was about 9 per cent per month in 1943, the above figures do not appear excessive."

Mr. Kiley also described in detail how, through the provision of better food and living quarters, the labor turnover in extra gangs has been held down.

Wayne A. Johnston, assistant vice-president, Illinois Central, described the training schools for new employees, particularly "teen-age" boys, on the I. C. He stated that the first school was established at Carbondale, Ill., and it was attended by 65 youths, aged 16. The number of applicants grew to the point where it was necessary to establish a second school at Memphis, Tenn., and, later, in the Chicago terminal. "Up to the present," he said, "2,500 young men have completed the course at the three schools and about 65 per cent are still in our service. In all cases those who have remained in our service have given a good account of themselves."

Mr. Johnston also described the schools for telegraphers, which have supplied the I. C. with about 300 operators so far, mostly young women. In the case of the schools for student clerks, young women have also predominated. He also detailed the methods used in training student dispatchers selected from the ranks of the telegraphers, and other methods of training that have been adopted.

H. A. McAllister, assistant to president, Erie, described how Erie employees are trained through three separate courses, depending upon their abilities and the positions they hold. These are the "Job Methods Training" the "Job Instructor Training" and the "Job Relations Training." He stated the belief, which he said has been proved on the Erie, that a man is never too old to learn, despite the proverbs to the contrary. The system used is an adaptation to the railway field of the methods used by the government in its "Training Within Industry" program. Pamphlets and cards describing the system were distributed at the meeting. E. E. Seise, assistant to superintendent transportation, Erie, then demonstrated the technique of the job leaders trained under these methods.

Demonstrates "Visual Instruction"

C. J. Millikin, superintendent, and K. T. Reed, trainmaster, of the Pere Marquette at Grand Rapids, Mich., gave a demonstration of the effective method of training new employees used on their division and described in detail in the *Railway Age* of April 8, 1944, page 682. The plan involves visual instruction by means of a series of lantern slides. The effectiveness of this method is materially enhanced by "localizing" the slides (that is to say, showing scenes with which the men are familiar).

T. P. Brewster, superintendent telegraph, A. T. & S. F., spoke on communication facilities as an aid in operations. In view of the centennial of telegraphy, he gave a resume

of the telegraph as applied to railroading. Mr. Brewster then outlined the many uses to which the telegraph and teletypes have been put to aid railway operations. He discussed the benefit of advance wheel reports and in the wire transmission of waybills, as an aid in avoiding delay to cars because of paper work. He described improved message circuits and the uses to which printing telegraph machines are put in making Pullman reservations. Mr. Brewster also dwelt upon the telephone as an aid to operations and traced the improvements that have been made in dispatching and message circuits. He outlined the present and possible uses of public address systems and of radio in railway operation.

Lessons for Post-War Use

T. M. Spence, general manager, Southern Pacific (Texas) Lines, was chairman of a committee which reported on "Lessons to Be Learned from Today's Operating Expedients for Post-War Use." As the most effective means of handling post-war traffic and meeting competition, the committee recommended the use of modern streamlined passenger equipment and new freight and passenger locomotives with a minimum of sizes and classes, to promote economy in spare parts and greater efficiency in effecting repairs. Shops and engine terminals specifically designed to meet local needs and the re-designing of yard facilities, with modern communication systems, were also recommended.

The report also stated that main tracks designed for maximum speeds are essential, such tracks to have improved siding facilities and C. T. C. where justified. Co-ordinated rail-highway service was also mentioned as an effective post-war mechanism.

Intensive research in all departments was recommended, covering such items as the use of lightweight freight cars, roller bearings, radio communication, rail-flaw detectors, tie and timber treatment and many others. Investigation of the possible use of plastics was also urged. In closing, the Committee recommended that well-organized programs be conducted to educate the public as to railway problems.

What the shippers expect from transportation officers was discussed by A. H. Schwietert, traffic director, Chicago Association of Commerce, and chairman of the "vigilance committee" on car efficiency, Midwest Shippers Advisory Board. In describing the activities of the vigilance committees, he stated that, as of April 1, 1944, there were 568 committees functioning, which covered 798 key cities. He also pointed out that the larger cities have many subcommittees, there being 31 in Chicago, for example. Mr. Schwierert stated that in such work it is frequently found that a slight change in operation on the part of the shipper, the receiver or the railway has resulted in far more efficient use of rolling stock.

He urged the need for prompt and accurate reports to the vigilance committees by the railways and stated that accurate information regarding car cleaning is particularly difficult to obtain. Nothing interferes with the increased car utilization campaign so much as recurrent failures on the railways' part to pull cars promptly after a receiver has gone to much trouble and expense in speeding their unloading. Receivers feel strongly that, to encourage proper cleaning of cars, the railways should supply facilities at team tracks and in congested industrial areas for the disposal of debris. The speaker pointed out that there are many cases where additional switching will materially increase car utilization. He also cited delays on the part of the railways in obtaining clearances for double or triple loads, which results in the cars standing idle under load for days. He emphasized the need for training switch crews to place cars properly to facilitate unloading by industries.

In an address on fuel conservation, John R. Jackson, engineer of tests, Missouri Pacific, told the superintendents how they can best co-operate in conserving the nation's fuel supply and, at the same time, save money for their railway. While not minimizing the good effects of meetings to consider the subject, he stated that thought, action and "follow-up" are also essential. Mr. Jackson listed several articles in the proceedings of various associations which would supply a superintendent with an effective, working library on fuel conservation. He predicted that coal consumption would increase disproportionately unless superintendents redoubled their efforts to save fuel. "Above all," he concluded, "fuel conservation is a matter to be dealt with by full co-operation between the operating and mechanical departments."

An analysis of statistical aids for division operating officers was contained in the report of the committee of which F. B. Whitman, superintendent, Chicago, Burlington & Quincy, at McCook, Nebr., was chairman. This report detailed and analyzed the respective values of the various types of statistics now supplied to superintendents, both as to comparative statistics and miscellaneous reports and made recommendations as to those which are most useful.

A committee of which O. C. Lott, superintendent transportation, Baltimore & Ohio, at Pittsburgh, Pa., was chairman, reported on "The Superintendent's Responsibility for Car Utilization and Supply." This was supplemented by an address by W. C. Kendall, chairman, Car Service division, A. A. R., on the same subject. The committee report dealt with the distribution and release of equipment, avoiding delays to empty cars and loading cars in the proper direction. It also stressed the importance of daily "on-hand" reports, the avoidance of "bunching" cars, proper handling of cars on repair tracks, car cleaning and the prompt disposal of cars of company material under load. The proper instruction of local agents and switch crews and the value of staff meetings to promote efficient car utilization, were also discussed.

Kendall Finds "Substantial Slack"

W. C. Kendall's address is summarized below:

"Twenty years ago, 30 miles per car per day was thought to be visionary—a goal devoutly to be wished but hardly within reach. Now, the average is over 50. Refrigerator cars are running 80 miles per car per day, and tank cars over 100! May not box and open top cars, when traffic volume demands, be handled with equal efficiency? The average load per car has increased in the 20-year period from 34.4 tons in 1923 to 41.0 tons in 1943. Here is a big factor in the record of ton-miles handled. The average car capacity in 1943, was 50.7 tons. With an average loaded haul of 470 miles per car, and an increased load of even 2 tons, and with each car being loaded an average of 28 times per year, there is a potential increase of 40 billion ton-miles per year, or 5.5 per cent over the record of 1943. Would you call this shooting at the moon? Based on past records of accomplishment, should we not fix our sights a little high?

"While the end of this war is not in sight, we are all confident of witnessing that postwar situation when, to protect our industry, we must be alert to take advantage of every opportunity to make our transportation plant a more efficient machine than it has ever been heretofore. With this in mind, it is in order to bring to our attention some of the items in car handling which are susceptible of improvement. With a better utilization of the plant than has ever before been made, and which is entirely practicable, costs can be lowered still further, and traffic thus held to the rails which might otherwise seek other agencies of transportation.

"Various money values are placed on car-days. Statistics will support a figure of $10. That is, every day a car is not doing its full duty, and there is a use to which such car could

be put, deprives the owner or the road on which it locates, of $10 in revenue. This may properly be called the earning power of the car. The average superintendent will not have to look very far afield to find hundreds of lost car-days within his jurisdiction. [The speaker here cited a dozen or so specific instances of delays to cars which added up to hundreds of car-days.]

"The superintendent has some responsibility with respect to checking with consignees relative to their failure to unload promptly or to control inbound shipments to accord with their unloading capacity.

"Another source of car misuse comes very close to the superintendent and it is doubtful that he can expect to escape assuming responsibility, i. e., excessive delays to company material. I will cite only one instance which admittedly is uncommon, yet it is illustrative of the delays that sometimes occur and which are not infrequently uncovered by field forces of the Car Service Division. In this instance a total of 70 cars, mostly gondolas, were found at one station under load with company material. With six exceptions, they were all foreign cars and, therefore, costing the railroad $64 per day per diem. At the time of the check these cars had a total detention of 2,000 car-days.

"I might continue with scores of similar examples. These are all current and taken from recent records. They illustrate the necessity for activity on the part of the Car Service Division in checking all roads in all parts of the country for avoidable waste of freight car equipment. Not a day goes by but that a substantial number of our field force of over 100 report what appears to be unnecessary and inexcusable detention to equipment. One cannot escape the conclusion that there is a very substantial slack in railroad capacity which requires attention and which, if made available, will make it possible for the railroads of the country to render service to a degree sufficient to meet any demand which may now be foreseen."

Centennial of Morse Telegraph

(*Continued from page 1071*)

The opening day found an important crowd gathered in the small Supreme Court chamber in the Capitol. Henry Clay, who had started his campaign for the Presidency, was there. Dolly Madison, wife of James Madison, fourth President of the United States, also was in attendance.

Morse sat down and tested the telegraph key shortly before 8 a. m. and a few minutes later Miss Ellsworth arrived with the first message. She and her mother had selected it several days before from the Bible. At 8:45 a. m. Morse began slowly tapping out the message. When Vail received it in Baltimore he exhibited it to the gathering there and immediately sent it back to Washington, where it was received with cheers.

It remained for private enterprise to make the benefits of the telegraph available to the world. Morse, Cornell and Smith began selling stock to finance the extension of the system. It was not long before they found enough farsighted business pioneers to finance the project, and the first line was extended to New York City in 1846. While doing this, they began licensing groups to build lines to other cities. Practically every city in the country became interested, and a number of short lines, all privately owned, were constructed.

The early Morse telegraph receivers actually recorded messages on paper tape in dots and dashes. In fact it was not until 1856 and later that operators learned that they could receive messages by ear. In 1846, Royal E. House patented a printing telegraph system which would receive more than fifty words a minute in Roman letters instead of dots and dashes. This system was placed in use in the next five years on several important eastern lines. In 1851, a Rochester, N. Y., group of men, headed by Judge Samuel L. Selden, and Hiram Sibley, formed a company known as the New York & Mississippi Valley Printing Telegraph Company, and bought the rights to extend the House system west of New York state. House was an original member of the board and all operations were to be by printing telegraphy. This company was formed for the express purpose of building a telegraph line from Buffalo, N. Y., to St. Louis, Mo., but money ran low by the time the line reached Louisville and business began with only that amount of line.

How "Western Union" Began

By this time 50 companies were operating short lines in various parts of the country. Messages were transferred from one line to another, or relayed through several systems. The consequent delay and expense were discouraging to the public, and by the time the New York & Mississippi Valley Printing Telegraph Company was operating, many short line companies were losing money and facing bankruptcy.

Selden and Sibley recognized this weakness of the infant industry and developed a plan for consolidating many of these small companies and establishing a national system, with a uniform tariff and a uniform standard of service. The strongest opposition they had was from Ezra Cornell who controlled the Erie & Michigan Telegraph line running from Buffalo to Milwaukee, and having contracts giving it important connections with the East, West, and South. It was, therefore, with Cornell that they next proposed consolidation. This consolidation took place on April 4, 1856.

They began to buy a number of the dozen smaller lines in the mid-west, under a special enabling act passed by the New York State Legislature. Cornell proposed that the name of the company be changed to the Western Union Telegraph Company, to indicate the union of the Western lines into one system. Sibley soon became president of the company, which continued to acquire competing lines.

The original Morse Telegraph Line between Washington and Baltimore, and later New York City, which was operated under the corporate name of the Magnetic Telegraph Company, was acquired by the American Telegraph Company in 1859. American became a part of Western Union in 1866.

In the early days, train movements were authorized by timetables, there being no means for communication to authorize trains to move at variance with the timetable. In the course of the extension of early telegraph communication a line was constructed along the Erie Railroad between Jersey City, N. J., and Port Jervis, offices being established in the railroad stations at the various towns. In 1851, Charles Minot, general superintendent of the Erie Railroad, was on board an eastbound train that was waiting at Monroe for a scheduled timetable meet with a westbound train. Mr. Minot went to the telegraph office and learned that the westbound train was a half hour or more late. He then sent a telegram to the agent at Turner, the next station to the east, ordering the westbound train to wait there. Mr. Minot then prevailed upon the engineman of the eastbound train to proceed from Monroe to Turner. Thus, for the first time, the meeting point between two trains was fixed by train order. This practice of authorizing train movements by train orders was extended rapidly on the railroads, until telegraph is now used on 77,374 miles of road and the telephone on 149,294 miles.

The centennial celebration was conducted under the auspices of the Association of American Railroads, the Western Union Telegraph Company, the International Telephone & Telegraph Corporation, R. C. A. Communications, Inc., and American Telephone & Telegraph.

Plywood Is Extensively Used in the Body of This Car

Plywood Used in Refrigerator Cars

40-ton cars have ice bunkers which can be adjusted for stage icing— Movable bulkheads add four feet to loading length when icing is not required and cars are used in ventilated service— Some cars have air-circulating fans

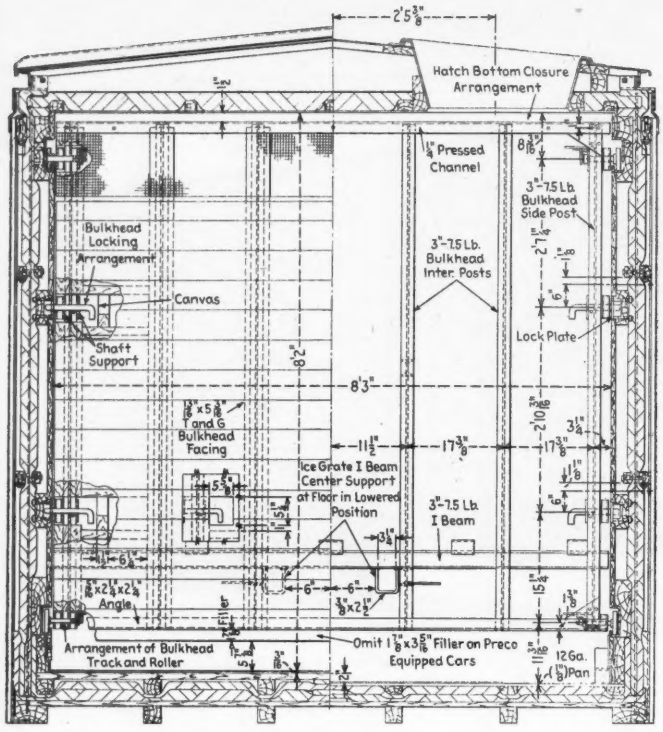
THE use of plywood for cars built by the Fruit Growers Express Company has increased during the past several years and its use was further accelerated by critical steel shortages which made it necessary to use plywood or lumber as outside sheathing. The plywood has proved to be a satisfactory material for such an application although it cannot be said to have replaced steel or other materials which will be more freely available again after the war. At the present time the cars are built, using plywoods of the exterior type representing the ultimate in moisture resistance, with a ⅜-in. ceiling, a ⅜-in. thickness under the floor pan, a ⅞-in. top floor and 9/16-in. side sheathing. The sub floor is made of square-edge common grade lumber. The inside lining and bulkhead facings are 25/32 in. by 5 3/16 in. tongue and grooved, B and better lining lumber. Floor racks are of the conventional wooden type.

Two hundred and twenty-five 40-ft. end-ice-bunker refrigerator cars are being constructed at the Chicago plant of the Fruit Growers Express Company. Although these cars follow a design which has been in general use for a number of years they are interesting particularly because of the amount of plywood which enters into their construction and because of the type of adjustable ice bunker which this company has developed for use on its equipment. The cars are being allocated to two different companies with the Western Fruit Express receiving 50 and the Fruit Growers Express 175. The cars which the Western is receiving are equipped with ventilating fans furnished by the Pacific Railway Equipment Company. Installation of these fans requires minor changes in design.

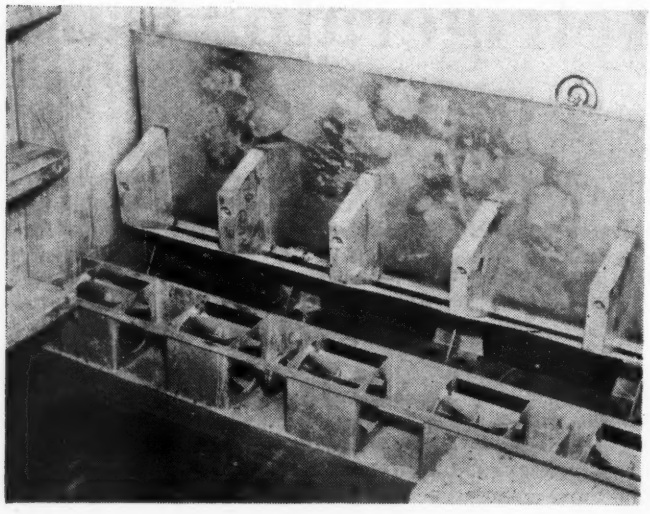
The Burlington Refrigerator Express Company is also building at its Plattsmouth, Nebraska, shops 75 Preco fan equipped refrigerator cars of the same general design as the cars of the other two companies except that vertical-grain fir car siding is used instead of plywood sheathing.

Welded Underframes

The use of welded underframes in freight cars is becoming increasingly common and this manufacturer has found it a particularly valuable method of fabrication both from the point of view of shop output and a considerable decrease in necessary car maintenance. Parts are assembled in five operations on jigs designed to hold close tolerances and to permit welding of all parts in a downhand position. Recent labor shortages have resulted in the employment of a number of women welders who


Hatch Bottom Closure Arrangement
Pressed Channel
3"-7.5 Lb. Bulkhead Side Post
3"-7.5 Lb. Bulkhead Inter. Posts
Bulkhead Locking Arrangement
Canvas
Shaft Support
Lock Plate
T and G Bulkhead Facing
Ice Grate I Beam Center Support at Floor in Lowered Position
3"-7.5 Lb. I Beam
Angle
Arrangement of Bulkhead Track and Roller
Omit Filler on Preco Equipped Cars
12 Ga. Pan

Moving of the Bulkheads to the Car Ends Adds 4 ft. to the Loading Length

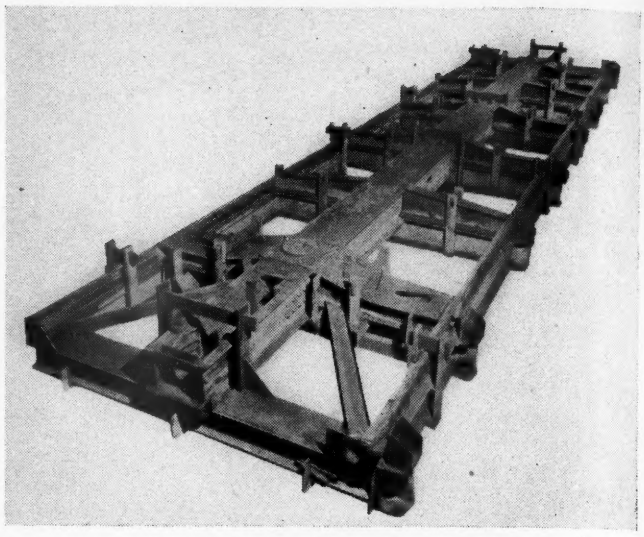


Air-circulating Fans Permit Higher Loadings While Providing an Adequate Distribution of Cooled Air—The Type Being Installed Differs Somewhat from That Shown Above in the Method of Application

have performed satisfactorily and whose output compares favorably with that of more experienced men formerly employed on center-sill assembly. The fact that all work is positioned enables them to give a maximum of satisfactory work with a minimum of fatigue. When the present order is completed, 700 cars will have been built with the all-welded underframe.

Grates Provide Variable Bunker Capacity

Since stage icing is desirable in the transportation of certain commodities and full bunker depth is not required, the design of these cars incorporates adjustable ice bunkers which permit the use of the cars, with relatively simple adjustments, in either fully-iced or stage-

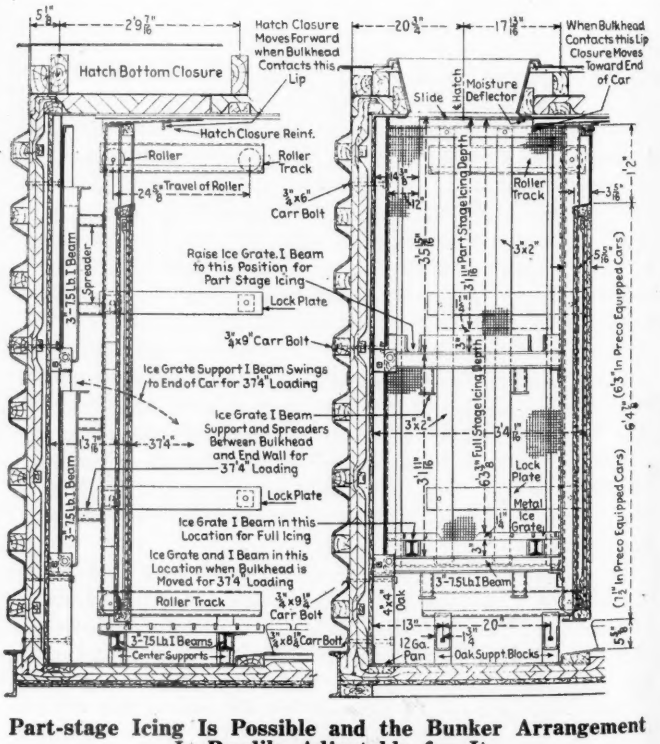


All-welded Underframes Are a Design Feature of the 40-ton Refrigerator Cars

iced service. The ice grates are supported on I-beams which, when at floor level, allow a full-stage icing depth of 6 ft. 3⅜ in.

Other I-beam supports are located so that they may be lowered and hold the grate to limit the icing depth to 3 ft. $1\frac{11}{16}$ in.

In addition to the provision of the part-stage icing feature of the bunker it is also possible to employ the cars in commodity service where icing is not required. The mechanical department has developed an arrangement whereby the bulkhead can be rolled toward the end of the car to give a 37-ft. 4-in. loading length as compared to the 33 ft. 2¾ in. available when the bulkheads are in normal position. Details of the stage icing features and of the bulkhead arrangement are shown in the drawings. The ice-hatch closure arrangement has proved to be especially effective in preventing the en-


Hatch Closure Moves Forward when Bulkhead Contacts this Lip
When Bulkhead Contacts this Lip Closure Moves Toward End of Car
Hatch Bottom Closure
Slide Hatch
Moisture Deflector
Hatch Closure Reinf.
Roller
Roller Track
Travel of Roller
Carr Bolt
Raise Ice Grate I Beam to this Position for Part Stage Icing
Lock Plate
Ice Grate Support I Beam Swings to End of Car for 37'4" Loading
Ice Grate I Beam Support and Spreaders Between Bulkhead and End Wall for 37'4" Loading
Ice Grate I Beam in this Location for Full Icing
Ice Grate and I Beam in this Location when Bulkhead is Moved for 37'4" Loading
Metal Ice Grate
Oak
Center Supports
12 Ga. Pan
Oak Suppt Blocks

Part-stage Icing Is Possible and the Bunker Arrangement Is Readily Adjustable for It

trance of moisture or foreign matter, when cars are used in services where the bulkheads have been moved to allow capacity loading of commodities which do not require refrigeration. Experience with the use of this bulkheading arrangement has also shown it to be one which can be readily adjusted by workmen not previously acquainted with it.

Directions are painted on the face of the bulkhead which indicate the steps to be followed in moving it in either direction.

Precooling and Air-Circulating Fans

Cars which are being equipped with the Preco mechanical cooling fan required that certain minor changes be made in the bunker and floor arrangements which do not, however, affect the cubic capacity of the car. This device is intended to increase carrying capacity by insuring a more even and more widely distributed flow of air throughout the entire car area, thereby permitting heavier loadings than are possible in cars which depend upon convection for the distribution of cooler air. The fans are operated by means of a rubber-tired wheel which is lowered upon the car wheel. The correct pressure between the two is maintained by a coil spring. Power is transmitted from the drive shaft to the blower shaft by a V-belt and two pulleys.

Wheel and axle ratios are such that at a 30 m.p.h. train speed the fan output is 1,500 c.f.m. and at 50 m.p.h. the fan output is 3,000 c.f.m. In terms of air turnover within the car this amounts to approximately three changes per minute.

Another feature of the arrangement is that a small motor can be attached to the blower shaft while the car is standing to maintain air circulation or aid in precooling. This motor is removed when the car is in transit.

Other Details

In general these cars follow the standard A. A. R. design for refrigerator cars with the principal changes made being those which have been adopted in the ice bunkering and ventilating systems by the owners of the equipment. The trucks are of the 40-ton spring-plankless type equipped with chilled-iron wheels. Draft gears are of an approved design as are the hand and air brakes.

The cars are insulated with a total protection of 3½ in. in the floors, 3 in. at the sides, ends and doors and 3½ in. in the roof. The door opening is 4 ft. by 6 ft. 6 in. Door headers, posts and stiles are of the rabbetted type. Ice bunkers have a total capacity of 263 cu. ft. and will accommodate 9,600 lb. of chunk ice.

Fire Extinguisher Uses Dry Chemical

A NEW fire extinguisher employing a dry chemical as the extinguishing agent has been introduced by the National Powder Extinguisher Corporation, New York. Known as the All-Out fire extinguisher, the new unit is designed especially for extinguishing both flammable liquids and fires of electrical origin. It ejects a stream of dry chemical which, when activated by heat, is said to form a dense, fire-smothering cloud over a flaming area up to 18 ft. across. The insulating qualities of the cloud are said to help guard against re-flash, and to create a heat-deflecting screen between the operator and the flame, permitting, it is claimed, close-range attack with greater safety and a minimum of discomfort.

It is said that the chemical is a non-conductor of electricity, and that it is harmless to humans and delicate parts of motors or other machinery. Weighing 37 lb. fully charged, the All-Out extinguisher is said to be easily maneuvered by men or women workers. It is claimed that it is fast in action and that it can be quickly recharged at the scene of a fire without special recharging equipment. Both the extinguisher and its extinguishing agent have been tested and approved by the Associated Factory Mutual Laboratories on burning oils, alcohol and gasoline fires.

The New All-Out Fire Extinguisher Weighs 37 Lb.

* * *

"G. I." Locomotive at Mitchell Field Air Base

This 25-ton Diesel-electric operates over a track 0.7 mile long, hauling all inbound and outbound freight between the Army base and the Long Island Railroad. The locomotive, built by General Electric, has a tractive force of 15,000 lb. and a top speed of 20 m.p.h. Shown in the cab is Sgt. Elwood P. Lauer, Port Jervis, N. Y., engineer.

Railroad Research Proves Out

A.A.R. tells Kilgore committee that the outstanding wartime performance of the carriers is the end result of such activities carried on over many years

WASHINGTON, D. C.

ANSWERING charges that the railroads have "lost their resiliency of youth," and that their policies and practices place "restrictions on the adoption and use of new technological developments," the Association of American Railroads on June 1 submitted to the Senate committee on military affairs' subcommittee on war mobilization one of the most comprehensive reports ever made on such matters as railroad performance and railroad enterprise in conducting, encouraging and adopting the results of research designed to improve their operations and services to the public.

The charges were made at hearings last February before the subcommittee which is headed by Senator Kilgore, Democrat of West Virginia, and has thus become known as the Kilgore committee; it has before it Mr. Kilgore's bill, S. 702, to create an Office of Scientific and Technical Mobilization. As noted in the *Railway Age* of February 19, page 400, the first of the above charges was made by the senator in a statement opening the hearings, while Wendell Berge, assistant attorney general in charge of the Department of Justice's Antitrust Division came along with a presentation undertaking to show, among other things, that the carriers had blocked technical progress.

A Most Comprehensive Presentation

In his letter submitting the A. A. R. statement, President J. J. Pelley said he understood that officers of the Association would be given an opportunity to appear at later public hearings. The Association has paved the way for such appearances with its comprehensive report which consists of more than 200 mimeographed sheets, and numerous photographs and charts designed to point up railroad operating performance and research activities.

The statement is in four parts, covering in turn the organization and activities of the A. A. R., with special reference to research and technological development; the nature and accomplishments of railroad research; the result of technological advances on the railroads as demonstrated by their wartime preparedness and performance; and a statement regarding the so-called Western Agreement, under which, Mr. Berge charged, competition among the railroads in western territory "was almost totally suppressed" in certain respects. Other material submitted was a series of exhibits embodying separate statements outlining the work done and results secured, together with present projects and something of the plans for the future in nine principal fields of railroad research; and the A. A. R.'s specific replies to a list of questions submitted to it by Senator Kilgore in March.

The keynote of the railroad answer to the charges is struck in that section of the statement which discusses the preparedness and wartime performance of the carriers, and relies on a "proof of the pudding is in the eating" test. There it is asserted that the final test of the effectiveness of research lies in railroad performance; and that the outstanding wartime performance "is the end result of preparatory work done by the railroads over many years, of their research activities, of improvements in plant and equipment growing out of research, and of all other progressive steps in the art of railroading."

Previously it had been asserted that in terms of railroad performance and service, the results of research, continuous since the railroads were born, can be summed up in this sentence: "In the year 1943 the railroads carried nearly twice as much traffic as they did at the peak of the first World War, did it with one-third fewer locomotives and passenger cars, and one-fourth fewer freight cars, did it with 500,000 fewer men and did it without the chronic congestions and delays of that time."

Lets the Results Speak

"The same men who are responsible for the progress which made possible such a record are working in the same way for still better railroading in the future," the statement went on. "Just what shape and direction this progress will take, no one can say with assurance except that it will be along the same general lines which, in the period since the first World War, have accomplished such results as these:

"More than doubling the transportation output of the average freight car per day.

"Increasing the net load of freight in the average train from less than 700 tons to more than 1,000 tons.

"Increasing the average speed of freight trains by 50 per cent.

"More than doubling the transportation output of the average train, on the road, with an increase from approximately 7,000 ton-miles to approximately 17,000 ton-miles per hour.

"Abolishing that old bug-a-boo of commerce, general 'car shortage.'

"Reducing the rate of casualties to passengers, including both killed and injured, by 65 per cent, and the rate of casualties to employees by more than 55 per cent.

"Cutting the ratio of loss and damage to freight to one-fifth what it was in 1920.

"Reducing the price of railroad service while improving its quality and safety. The average charge for hauling a ton of freight one mile in 1921 was 37 per cent more than in 1943; the average charge for carrying a passenger, 64 per cent more.

"All this has been accomplished despite increases in wage rates, in taxes, and in prices for materials and supplies."

It is explained that the research "back of this record of performance" is not centralized "in one great building labeled 'Railroad Laboratory,' but is decentralized in hundreds of laboratories, shops and offices, and out on the road. It is carried on cooperatively by individual railroads, by the Association of American Railroads, and by the hundreds of companies which manufacture and supply the thousands of different sorts of things which railroads buy and use."

Such a spreading out of the industry's research activities is called necessary because of "the very nature of the railroad business." It is pointed out that the railroads do not make things to sell—"they buy things, put them together, and use them in the production of transporta-

tion service." The fact that the railroads are spread wide, their size, and the variety of operating conditions encountered require "the most exhaustive field and service testing of the products of laboratory and factory before they can be fitted into the general pattern of railroad plant and operations."

Moreover, the railroads cannot shut down to "retool" for "annual models," and thus "every device and appliance offered for their use must gear in with what is already there, and during a period of gradual transition, must work right along with the existing devices." Along the same lines, the introduction of a new feature in railroad operations "frequently necessitates the extensive development of related factors"; the introduction of high-speed, streamlined trains, for example, "required modifications or extension of signaling, new high-speed turnouts, alterations or improvements in watering, fueling and general servicing facilities, along with altered shop layouts for the inspection and repair of the newer types of equipment employed."

Thus research of the "service testing" variety is going on all the time on the railroads, conducted by railroad men, "most of whom would not be thought of, and would not think of themselves as, research men." All of which makes it "impossible to draw a hard and fast line between *research* and *operations* of the railroads."

A. A. R. the Coordinating Agency

Meanwhile, the statement points out that much of the industry's cooperative research is organized through the technical committees of the A. A. R., of which there are at present 174 in the Operations and Maintenance Department alone. It is emphasized, however, that, important as is its research work, the A. A. R. is nevertheless "chiefly a coordinating agency" of the research "done all over the United States in the laboratories and proving grounds of the railroads in their daily operations." Then come brief outlines of results thus far achieved and research still under way in the fields of roadway, equipment, use of electricity, signaling, safety, transportation of explosives, freight containers, loss and damage, rate-making and publishing, and reduction of "paper work."

Some of Senator Kilgore's observations had indicated that he thought railroads may have been slow in adapting radio to railroad operations, especially in the field of signaling. The A. A. R. report states that railroad experiments with radio were undertaken as far back as 1914; and the matter has been "the subject of investigation, test, and research ever since." With this and all other research that has been devoted to signaling, however, "no substitute has been found for the continuous closed track circuit as an automatic safety measure."

Another type of railroad research listed by the A. A. R. was what it called "customer and employee research." In the 13 Regional Shippers' Advisory Boards and their National Association, it went on, the railroad industry "enjoys the benefits of what well may be regarded as the country's outstanding example of organized customer research." The boards' quarterly estimates of future demands for cars, for the past 13 years, "have averaged an accuracy of better than 97¾ per cent." Then there are the railroad efforts to obtain suggestions from passenger customers. In that connection, it was thought interesting to note that the Pullman Company "has adopted, and is prepared to put into effect as soon as the war is over, more than 100 suggestions received from passengers and railroad men, for improvements in the new designs of sleeping cars which were put into experimental service just before the beginning of the war."

Also, there is the railroad practice of encouraging "employee research" with suggestion systems providing payments for suggestions and ideas from employees "who are in a position to observe the actual working out in practice of developments." One railroad has paid out $150,000 for such suggestions during the past five years. Finally, it is asserted that railroads "are open to suggestions from outside inventors and manufacturers," it being "part of the regular work of the technical divisions and sections of the A. A. R. to receive such ideas, and to give those which appear to have merit further investigation and research."

"Volume and Character" Final Test

The statement's section on the "Wartime Preparedness and Performance of the Railroads" is a well-documented treatise on the railroad contribution to war transportation, comparisons of the war record with previous years, comparisons of 1916 with 1943 operations, and discussions of locomotive and car ownership and use. "The final test of the preparedness of the American railroads for the war emergency is to be found in the volume and character of the transportation service they have rendered the nation under the stress of war conditions," the section's summary says, adding that "applying that test, the railroads deserve high rating."

"In terms of transportation volume," it continues, "railroads increased their freight service 118 per cent between 1939 and 1943, and their passenger service 288 per cent. In other words, they more than doubled the volume of their freight movement, and much more than tripled the volume of their passenger movement. Many special services have been rendered, as in the organized movement of troops and military supplies, petroleum to the East coast, coal to New England, lumber, and other products.

"Of the total increase in transportation service in the United States between 1939 and 1943, by all modes of commercial transport, the railroads handled more than 80 per cent in respect of freight and 75 per cent in respect of passenger travel. That is, the bulk of the war-stimulated traffic has fallen to, and been adequately handled by, the railroads. Had they not prepared for the emergency, they could not have taken on thus unprecedented and rapid increase in demand, nor could they have met the demand so adequately and satisfactorily.

Handling Bulk of War-Stimulated Traffic

"Efficiency factors show the progress made by rail carriers, both preceding and during the current war period. Confining the comparison to the war period, 1939 and 1943, average daily mileage per locomotive has increased 20 per cent in both freight and passenger service; daily mileage per freight car has increased nearly 40 per cent; the service obtained from the average freight car per day has increased 80 per cent.

"Freight train performance has greatly increased; the average load per freight train has increased 37 per cent, and the total service performed by the average freight train per hour has increased 26 per cent. Average occupancy per passenger car has increased 144 per cent, while average occupancy per passenger train has increased from 58 persons in 1939 to 189 persons in 1943, or 225 per cent.

"This progress in efficiency was no accidental occurrence. It did not just happen. It resulted from improvement of the railroad plant, brought about by the capital expenditure of 12 billions of dollars since 1921, of which nearly four billions were expended during the

past 10 years. It resulted from continued progress in technology; better machines to work with, better rather than more locomotives and cars, more stable roadbed and tracks, heavier and improved rail and rail fastenings, modernized signaling. It resulted from improved methods of operation, more efficient organization, and a much more intensive utilization of the plant and its several parts. It reflected a high degree of cooperation between railroads and shippers, and between railroads and the government transportation agencies with which they deal.

Alertness in Preparation Brought Results

"The composite result has been a better railroad transportation plant, more effectively operated and with a greater degree of cooperation from all parties at interest. Such a result could not have been attained, had not railroad managements been preparing for years against the emergency that finally arrived. Alertness in preparation has produced the highly satisfactory war services that have been described."

Meanwhile, the section devoted to the organization and activities of the A. A. R. had explained again how the Association's part in railroad research is carried on largely through the committees of its various divisions. Special mention is made, however, of the Railroad Committee for the Study of Transportation, organized in 1942 under A. A. R. auspices and operating under the chairmanship of A. A. R. Vice-President R. V. Fletcher. The progress of this committee's work was reviewed in the *Railway Age* of May 20, page 950.

"The object of the study," as the A. A. R. statement put it, "is to compile and present in usable form basic information about all forms of transportation and all phases of railroading, primarily for the use of railroad men in their efforts to obtain the highest degree of usefulness of railroads under changing conditions during and after the war, with particular emphasis upon future developments."

The "continuing research" of the A. A. R., it is explained, "is not organized as a separate subdivision but is an integral part of the general work" of the Association. In response to one of the committee's questions, it was estimated that the A. A. R. had spent for research work a total of $6,320,374.20 during the period from January 1, 1935, to December 31, 1943. But here again it was explained that A. A. R. research work is not segregated; and the Association's officers in answering the question used their best judgment in supplying the figure, charging to research "efforts directed to the improvement of the art of railroading, as contrasted with efforts involved in carrying on day-to-day operations." On the same basis, the A. A. R. budget for 1944 includes for research $1,035,957.50, which is 17.7 per cent of the total budget.

The Western Agreement

The section dealing with the so-called Western Agreement puts the pact in its proper setting, pointing out that it was entered at a time when the railroads were being admonished to eliminate "wasteful competitive practices." Such an admonishment was included in the Interstate Commerce Commission's 1931 decision in the so-called Fifteen Per Cent Case, and the agreement, entered into in December, 1932, was "largely" a result of that decision.

It is denied that there was any secret about the agreement, the press having been "fully advised" of the plan and the functions which the Commissioner of Western Railroads was expected to perform under it. Also denied is the Berge charge that the agreement had an adverse effect upon the development of air conditioning and other technological or service improvements. "The air conditioning program," it is asserted, "developed in an orderly way and as rapidly as good business judgment permitted"; for air conditioning came at a time "when railroad revenues were at a very low ebb and when necessarily expensive innovations of this kind had to be financed from lean treasuries, barely able to meet pressing and imperative obligations."

The statement also set forth in full W. A. Harriman's defense of the Western Agreement, which had been read by Judge Fletcher at the Senate interstate commerce committee's June, 1943, hearings on bills proposing to give statutory sanction to rate bureaus in the transportation industry. It was explained that Mr. Harriman, now ambassador to Russia, was chairman of the board of the Union Pacific when the agreement was adopted. Also quoted was a statement made at the same hearing by the late Joseph B. Eastman who expressed his conviction that the agreement "had no sinister purpose," and pointed out, too, that the railroads were enjoined by the Emergency Transportation Act of 1933 to create committees and bring about the elimination of "wasteful competition."

Agreement Promoted Improvements

The A. A. R.'s answer to one of the committee's questions asserts that the agreement "aided in the progress of technology by enabling the railroads to have funds with which they could carry on their experiments"; and "it certainly did afford a means for the exchange of ideas." It is significant to note, the answer continues, that the period during which such agreement was in effect [1932 until the early part of 1943, when it was abrogated] "marks an era of phenomenal advancement in railroad technology, evidenced by revolutionary development in streamlined passenger equipment, in air conditioning and in motive power; by the investment of millions in specialized equipment such as automobile device cars, etc."; and by "basic changes in freight service," including the inauguration of pick-up and delivery service on l.c.l., and the development of coordinated rail-highway operations.

On May 31, the day before the A. A. R. statement was submitted, Senator Kilgore issued a press release to call attention to the fact that the record of the February hearings "on the use of radio for railroad communication and signaling" had come from the printer. The release mentioned the testimony of William S. Halstead, president of the Halstead Traffic Communications Corporation (see *Railway Age* of February 19, page 401); and called particular attention to excerpts from the now-released "executive testimony" of E. K. Jett, recently appointed to the Federal Communications Commission. Then, as the press release put it, "Senator Kilgore pointed out" that the number of companies making applications for radio permits in connection with railroad operations "since the subcommittee's hearings exceeded the number of applications in the previous 15 years."

The release went on to say: "Senator Kilgore added that the subcommittee would continue to collect testimony on the subject and would watch with interest the results of the Federal Communications Commission's investigations." The latter is a reference to F. C. C.'s pending inquiry (see *Railway Age* of May 6, page 862) "into the feasibility of using radio as a safety measure and for other purposes in railroad operations."

Railroads-in-War News

Rules for Rehiring Returning Veterans

Just what employers' duties are to fighters is made clear by Selective Service

A memorandum outlining the principles to be followed in the administration of the provisions of the Selective Service Act of 1940 dealing with the re-employment of veterans has been made public by national Selective Service headquarters. It takes up such questions as the determination of "permanent" or "temporary" employment, the qualifications of veterans for re-employment, the duties and obligations of employers, and the disposition of seniority rights.

As outlined by Selective Service, the memorandum names these requirements:

Seniority rights accumulate during the veteran's period of active service in the armed forces in the same manner as they would have accumulated had he remained continuously at work in his civilian occupation.

A veteran, in order to claim reinstatement in a position, must be qualified to perform the duties of that position. If unable to qualify for an upgraded job, he still is entitled to a position equal in pay, seniority and status to the one he left.

A veteran is entitled to reinstatement in his former position or one of like seniority, status and pay, even though such reinstatement necessitates the discharge of a non-veteran with greater seniority.

A veteran is entitled to his former position or one of like seniority, status and pay, and may refuse another, even though the pay is greater and it offers other advantages.

Conscientious objectors have no re-employment rights under the Selective Service laws.

Those eligible for veterans' preference are "persons who entered the Army, Navy, Marine Corps or Coast Guard (male or female) subsequent to May 1, 1940, but the veterans seeking benefits must have a 'certificate' indicating satisfactory completion of service in the armed forces."

The veteran is required to make application for re-employment within 40 days after he is relieved from training and service. "This is mandatory and compliance is essential if the veteran is to enforce his re-employment rights over the objection of the employer."

A veteran entitled to re-employment rights has recourse to the courts to recover back pay after reinstatement if it was improperly delayed or postponed by the employer.

A veteran entitled to re-employment may not be discharged from his restored position without cause within one year thereafter. The question of "cause" is to be determined by "standards of common sense" in accord with the practices and customs of the industry and locality. The same one-year limit affects displacement of the veteran by another with greater seniority rights.

A soldier who is placed in an inactive status and transferred to the Enlisted Reserve Corps at his own request, on condition that he will engage in essential industry, is required to apply to his former employer for re-employment within 40 days thereafter in order to maintain his re-employment rights.

The responsibility of Selective Service in connection with the reinstatement of veterans in their old jobs is discharged through a Veterans Personnel Division at national headquarters, with decentralized responsibility to state directors, with authority to set up local machinery to carry out such responsibilities.

A private employer is not required to reinstate a veteran if his circumstances have so changed as to make it unreasonable or impossible to do so. What changes in circumstances will so result must be determined by the facts in each case, and the employer's convenience is not to be considered.

Authorizes Truck-Rail Co-ordination

The Office of Defense Transportation has authorized six common carrier truck operators operating from points in California to destinations in Oregon and Washington to substitute rail for motor vehicle service in order to utilize equipment more fully and to reduce traffic congestion. The certificate authorizing this substitution became effective May 25, together with the Interstate Commerce Commission's Emergency Order M-5.

The motor-rail diversion applies to the movement of commodities from San Francisco, Calif., Oakland, and certain nearby points to Portland, Ore., or Seattle, Wash., by Consolidated Freightways, Pierce Auto Freight Lines, Los Angeles-Seattle Motor Express, Oregon-Nevada-California Fast Freight, System Freight Service, and Mitchell Bros. Truck Line. The diversion of shipments to rail service was necessary, according to the O. D. T., because of an unbalanced freight movement between those points, where empty freight cars and heavily loaded trucks have been moving in the same direction.

70,000 Are Returning Monthly—At present discharged veterans are entering industry at the rate of 70,000 per month, according to an Office of War Information press release. Only 25 per cent of the veterans discharged through hospitals since May 1, 1940, however, according to this statement, are returning to the jobs they held before entering the armed services. The majority are taking so-called war production jobs, and the federal employment service in February and March placed 74,000 veterans in such civilian jobs.

Freon for Air-Conditioned Pullmans

The Surgeon General's Office of the Army has granted a top priority on freon so that every Pullman sleeping car using that refrigerant will be made ready for instant use this summer for moving invasion casualties from seaports to hospitals. As a result, regular passengers will get the benefit of air-conditioned service on the cars when they are not in hospital-train service.

The decision to provide the freon for all sleepers requiring it for their air-conditioning equipment was made to avoid any delay in having air-conditioned cars near whatever port of debarkation would need them. How the railroads have been organized to move the invasion casualties was indicated in the *Railway Age* of May 20, page 998.

Military Railroad Men Are Honored

General Gray's soldiers are cited for "performing the impossible"

The entire Military Railway Service in Italy, under the command of Brig. Gen. Carl R. Gray, Jr., has been awarded by Lt. Gen. Mark W. Clark the Fifth Army Plaque and Clasp for "excellence in discipline, performance, merit," Allied Force M. R. S. Headquarters reports from Italy.

This recognition, which ordinarily is accorded only to units within the command of the Fifth Army, is the highest yet to be received by military railroaders, and in ceremonies timed to take place on his 55th birthday, General Gray received the award before members of his entire railroad staff and a number of officers of his operating and shop units. General Clark's deputy chief of staff presented the elaborate inlaid Italian wood tablet to the M. R. S. Director General, together with a letter from the Fifth Army's commanding general. General Clark had written, as follows:

Performed the Impossible—"I have regarded with mounting admiration the operations of the Military Railway Service in its support of the Fifth Army. From the early days at Paestum, the effectiveness of those operations has been inextricably linked with the success of the Italian campaign.

"In planning, construction, and operation, the Military Railway Service has habitually performed the impossible. Despite clever enemy demolition, your engineers have executed near-miracles of reconstruction.

"The spirit of the Military Railway Service Staff is outstanding and bespeaks of leadership of the highest quality. From Commanding General to enlisted locomotive engineer, each displays a genuine desire to co-operate and to serve. Plans have been based, not on the easiest solution, but on the one that would most fully meet the needs of the Army. With unswerving concentration on the task ahead, your officers and men have labored often under fire in planning, constructing and operating the rails to the forward areas, virtually to the Army front lines. Time and again, crucial materials and reinforcements could not have been brought into action except for the outstanding performance of the Military Railway Service.

"It is therefore with genuine pleasure that I pay tribute to this outstanding service by the honorary award of the Fifth Army Plaque and Clasp to the Allied Force Military Railway Service for exceptionally meritorious service in the movement of supplies for the Fifth Army. Although this plaque is normally given only to organizations un-

der Fifth Army control, I believe it is particularly fitting that on your birthday this tribute be presented to you, who as Director General organized, trained and now guide and direct the Service which has played such an important role in Fifth Army operations."

Britons and Italians Also Serve—Most of the railway operating and shop battalions now in Italy with General Gray first received recognition for their work in North Africa, in support of the American II Army Corps and the British Eighth Army.

Not only American troops, but British and Italian rail units are under General Gray's command in Italy. Specifically cited by General Clark in the Plaque and Clasp Award were 10 American units, 7 British and 4 Italian. American units were the 701st and 703d Railway Grand Divisions; the 713th, 727th, 715th, 719th and a detachment from the 759th Railway Operating Battalions; the 753d and 760th Railway Shop Battalions and the 2682d Base Depot Company.

British Railways Employ Women Fog-Signalers

Railway women, who today represent over one-sixth of the entire staff of the British railways, are now volunteering for one of the most arduous of railway jobs—fog-signaling (i. e., placing torpedoes on track in thick weather to give enginemen an audible warning of the position of fixed signals), reports T. D. Slattery, general traffic manager of the British Railways in New York.

Necessary to the job, he observes, are a "clear head and steady hands" and, he pointed out, always in the past the work has been performed by men. The torpedoes are placed either by the use of a special machine or by hand (some hazard of being struck by moving trains being involved in the latter case).

Fog-signalers are also expected to be particularly alert to detect anything unusual in the operation of trains or fixed signals.

Co-ordinates New England Bus Operations

Co-ordinated bus services between Boston, Mass., and St. Stephen, N. B., are affected by Special Order ODT B-13A of the Office of Defense Transportation, effective June 4, superseding a 1942 order covering such operations. The new order provides for co-ordinated operations of the Eastern Greyhound Lines of New England, the Boston & Maine Transportation Co., and the Maine Central Transportation Co.

In addition to requiring ticket interchange and traffic diversion between the carriers involved, the order provides that Greyhound will not operate between Belfast, Me., and Bangor, and will suspend its services between Boston and Concord, N. H., and between Portland, Me., and Belfast. Schedules are "frozen" by the order as follows: Greyhound is to operate no more than seven scheduled round trips daily between Boston and Portland, two round trips daily between Portland and Bangor, and one round trip daily between Bangor and St. Stephen; Boston & Maine Transportation Co. is to operate no more than nine scheduled round trips daily between Boston and Portland; and Maine Central Transportation Co. is to operate no more than three round trips daily between Portland and Bangor, via Augusta, and one round trip daily between Bangor and St. Stephen. The latter named bus lines are affiliates of the Boston & Maine and Maine Central, respectively.

Urges Government Agencies to Curtail Travel

Warning that 1944 threatens to be a heavy convention year, the Office of Defense Transportation has appealed to all government agencies to "take the lead aggressively" in discouraging convention and vacation travel.

In a letter addressed to these agencies, O.D.T. Director J. Monroe Johnson outlined a four-point travel-conservation program:

1. Greater use of mail, telegraph, and telephone, rather than the sending of a representative to transact business.

2. Where it is necessary to send a personal representative, that one, rather than two or three, or the fewest possible number, be sent.

3. That travel on intercity public carriers during annual leaves be discouraged.

4. That any travel which leads to or augments heavy concentrations of travel be scrupulously avoided.

For the past two years the O.D.T. has campaigned to reduce travel, level traffic peaks, discourage conventions and curtail non-essential travel. "As part of this campaign the O.D.T. has requested the fullest cooperation of other government agencies," Col. Johnson said. "This support is doubly necessary now, both to insure the leadership and example essential to the success of any government campaign that affects the public generally, and because the transportation situation is alarmingly tight."

Despite pleas that conventions be cancelled, Col. Johnson said, present indications are that 1944 will be "one of the largest convention years in recent history. The reports we have received indicate that few of the conventions now scheduled would, upon close scrutiny, fall within this category," he added. "However, many of the organizations planning conventions justify them as an aid to the war effort because of the attendance of government officials as speakers, discussion leaders, etc. In many cases the attendance of government officials provides the principal excuse for calling the convention. It is now necessary, in the interest of war transportation needs, that government officials refuse to attend or participate in any convention which will not demonstrably contribute to the shortening of the war."

1943 Average Carload Sets New All-Time High Record

In 1943 the average loading of carload freight reached a new record high of 41 tons per car, according to data compiled by the Association of American Railroads. This made the fifth consecutive year in each of which a new high record was established. The average increase over 1942 was 0.9 tons per car. A new high record was set also in each individual commodity group.

Credit for the substantial saving in transportation thus obtained was assigned both to the effective enforcement of the Office of Defense Transportation's General ODT 18-A and to the continued splendid cooperation accorded the railroads by the shippers and receivers of freight, according to a statement by W. C. Kendall, chairman of the A.A.R. Car Service Division. It was pointed out that to handle the carload tonnage

* * * *

Associated British & Irish Railways Photo

Glasgow Home Front Guards of the London, Midland & Scottish Piping a Welcome to American Troops Arriving in Britain

moved in 1943 at the average load prevailing in 1942 would have required 809,655 more carloads during the year, or an average of 2,600 for every working day. On the basis of the average turn-around time maintained in 1943, this heavier loading released for other service about 32,,400 cars.

The average load for the principal commodity groups, 1943 as compared to the preceding year, was stated as follows: Products of Agriculture, 34.1 tons against 30.7; Animals and Products, 15.4 tons against 14.6; Products of Mines, 54.8 tons against 54.4; Products of Forests, 35.5 tons against 33.0; and Manufactures and Miscellaneous, 31.4 tons against 30.1.

W. P. B. Changes Car Material Allotment Schedules

In order to assure procurement of component parts to meet delivery schedules, the War Production Board has found it necessary to extend to seven months the so-called "lead time" between approval of the material schedules for freight car construction and actual delivery of the cars, the new Railroad Car Builders Industry Advisory Committee was informed at its first meeting May 25.

The government presiding officer for the committee was David W. Odiorne, chief of the rolling stock section of the W.P.B. Transportation Equipment Division. Members of the committee are W. C. Bower, vice-president purchases and stores of the New York Central; T. M. Evans of the Mt. Vernon Car Manufacturing Co.; K. W. Fischer, assistant to the president of the Chicago, Burlington & Quincy; K. C. Gardner of the Greenville Steel Car Co.; R. L. Gillispie of the Bethlehem Steel Co.; C. A. Gill, vice-president operations and maintenance of the Reading; A. Van Hassel of Magor Car Corp.; T. P. Gorter of Pullman-Standard Car Manufacturing Co.; Frank A. Livingston of Ralston Steel Car Co.; J. F. McEnulty of Pressed Steel Car Co.; and R. A. Williams of the American Car & Foundry Co.

The committee was told by W.P.B. representatives that the equivalent of 85,500 freight cars will be scheduled for 1944 production, including the carry-over from 1943's schedules. This figure, however, includes allocations to all claimant agencies, including the military services, their quotas of smaller cars having been converted for statistical purposes to equivalent standard cars. The actual production in 1943, including the "compensated units" representing military service allotments, was about 68,700 cars, they indicated.

To Build Fewer Cars in '45—The W.P.B. representatives predicted that the over-all freight car production requirements in 1945 will be smaller than this year, depending on manpower conditions, the availability of components, and the success attained in maintaining the new "lead time" schedule. In setting up production programs for earlier periods a lead time of four months was considered adequate, but difficulties in obtaining components to meet delivery schedules have upset this arrangement. It was indicated that the W.P.B. will defer its authorization of material allotments to car builders until it determines that the builder has made arrangements to order his materials.

Members of the committee recommended abandonment of the quota system of planning freight car production when this year's program is completed, pointing out that the situation has changed since the system was introduced in December, 1942, at a time when orders on builders' books exceeded available materials or facilities.

Third-Quarter Steel Allocations

The Office of Defense Transportation, as claimant agency for the transportation industry under the War Production Board's Controlled Materials Plan, has been allotted for this year's third quarter 1,378,524 short tons of carbon steel with "proportionate amounts" of alloy steel, copper and aluminum. As the announcement put it, O. D. T.'s requests "were granted almost in full."

In the latter connection the request for new replacement rail was cut from 560,000 tons to 500,000 tons, "because of military requirements for shell billets produced in certain rail mills"; and track accessories were "correspondingly reduced from 296,000 to 265,000 tons." The only other cut was the 35,000-ton reduction in the amount of carbon steel requested for motor trucks and truck-tractors. Meanwhile, however, there has been an additional allotment of 330,000 tons from the general W. P. B. reserve "for railroad and local transit maintenance, repair and operating supplies."

The carbon-steel allotment for freight cars is 305,000 tons, "enough to cover all orders on hand for freight car production in the fourth quarter," when the third-quarter allotment will be used. It has been learned that the fourth-quarter orders call for a total of 16,300 cars. The allotment for locomotive production is 42,500 tons. For railroad marine equipment, 5,000 tons was authorized.

Other allotments were: Motor transport, 216,580 tons; local transit, 39,670 tons; waterways, 4,000 tons plus 500 tons from the W. P. B. reserve. "Since the claims for transportation were almost entirely met," the announcement said, "O. D. T. officials urge that the allotted quotas be fully utilized by operators and manufacturers to prevent slippages from production schedules."

Tank Cars Still Handle Much of East Coast Oil

Present overland movements of petroleum to the east coast area are even higher than the unrestricted pre-war movements by water, according to a statement May 25 by Deputy Petroleum Administrator Davies. Where tankers were formerly able to carry about 95 per cent of the total oil movement to that area, he explained, lake and ocean vessels now move only 13 per cent of the average weekly total. Barges handle about 5 per cent, and the rest comes by land transportation, with tank cars moving 44 per cent of the total quantity and pipelines 38 per cent.

During the week ended May 20, the average daily movement of crude oil and petroleum products into the Atlantic coast area was 731,899 barrels, he disclosed. In the same period the so-called Big Inch pipeline delivered an average of 288,649 barrels a day and the "Little Big Inch" 174,732 barrels a day. Tank cars shipments in the week ended May 13 average 781,226 barrels a day.

Materials and Prices

The following is a digest of orders and notices that have been issued by the War Production Board and the Office of Price Administration since May 8, and which are of interest to railways:

Fluorescent Lighting Fixtures—The manufacture of fluorescent lighting fixtures must continue to be curtailed because of the limited available production of ballasts and transformers for these fixtures, the WPB said in reporting on a meeting of the Industry Advisory Committee. Available production of ballasts and transformers continues to be limited because of greatly increased requirements for transformers for military use, the committee was told.

Heating Equipment—Limited restoration of copper and copper base alloy products to replace steel in the manufacture of specified items of extended surface heating equipment, including blast-heating coils, convectors and unit heaters, has been provided by amendment of Conservation Order M-9-c. This action is expected to result in a saving of approximately 350,000 man-hours a year. Need for emergency repairs and replacements will be greatly reduced, WPB said, while approximately 50 per cent in manufacturing time will be saved by use of copper in place of the substitute materials previously required.

Iron Products and Steel Forgings—The minimum preference rating has been raised to AA-5 and higher for the delivery of iron products and carbon alloy steel forgings as a result of amendment of general preference order M-21. The only exceptions to the higher rating on these products are those permitted under PR 13 or specifically authorized in writing by WPB. The amendment provides that other steel may not be delivered except as permitted under CMPR 1 or 4, under PR 13 or 19, under Order M-21-b-1 or M-21-b-2, or as specifically authorized by WPB. Purchase orders must be accompanied by a certification of the applicable rating in substantially the form provided in PR 7.

Prices

Grain Doors—Amendment No. 2 to MPR-483, effective May 15, provides increased price ceilings for "general manager type" grain doors, made of southern pine lumber, which reflect the exact increase in lumber cost resulting from increases in ceilings for southern pine lumber established last month. The increase on a full size door (7 ft. by 20 in. by 1⅝ in.) is 8½ cents, making the new ceiling $1.395. The increase of 5 cents on a half size door makes the new ceiling 83½ cents. The ceilings for doors made from other species of lumber are not affected.

Red Cedar—Amendment No. 1 to MPR-402 effective May 25, provides the following principal pricing changes for red cedar:

Table 6 (Finish). The prices of all short lengths 3 ft. to 5 ft. have been reduced $5 per M. b. m. and prices have been established for lengths shorter than 3 ft. to conform to industry practice.

Table 9 (Gutter). Prices on gutter 4 in. by 4 in. and larger have been increased $5 per M. b. m. These are more than compensated for by the reduction of $5 per M. b. m. made in heavy clears (Table 7) from which gutter is made, as more thick clears are produced than gutter.

Table 17 and 18 (Boards and Dimension). In accordance with the recommendation of the industry advisory committee and to increase the production of a better grade of boards and dimensions a price has been set up for select merchantable boards, previously unlisted.

The price of 1 in. No. 4 has been raised 50 cents per M. b. m. rough or surfaced, to bring it in line with prices for dunnage in other species.

GENERAL NEWS

B.I.R. Study Compares Transport Wage Costs

Report of the "economy and fitness" series is sent to Congress

Reporting to President Roosevelt and Congress on one of its labor surveys, the Board of Investigation and Research this week recommended that its work be followed up with a "job evaluation study throughout the interstate for-hire transportation industry," such a study to be made by the permanent Federal Transportation Authority, which B. I. R. would like to have set up, in cooperation with the Department of Labor. The recommendation was made in the report on "Hourly Remuneration Rates by Occupations in the Transportation Industry," which was prepared under the supervision of Dr. Dan H. Mater, chief of the board's Labor Studies Section.

Unions Wanted This Study—This is one of the reports in which the railroad labor organizations were interested when, as reported in the *Railway Age* of February 26, page 432, J. G. Luhrsen, executive secretary of the Railway Labor Executives Association, supported the board's unsuccessful effort to have additional funds for it recommended by the Senate committee on appropriations. In the line-up of the board's work, the report is part of the general investigation of the relative economy and fitness of the various agencies of transport. It was in what the board called its "preliminary report" on economy and fitness (see *Railway Age* of May 27, page 1029) that the recommendation for a permanent Federal Transportation Authority was made.

Robert E. Webb, chairman of the board, and C. E. Childe, the other member, as their letter of transmittal shows, deemed the present study "desirable," because "the key to an understanding of relative economy and fitness is to be found in analyses and comparisons of cost, service, and rate relationships"; and the cost of labor "composes the largest and most dynamic element in transport costs."

Truck Pay Found Low—The study in general found that the average hourly remuneration rate paid to employees by any form of transport varies between the eastern, western, and southern districts; but these territorial differences are unlike from one kind of carrier to another, "with the effect that the competitive relationships between the various kinds of carriers in any one district are not the same as those in the other districts." Most of the comment and supporting data bear on the railroad and motor carrier industries, the difficulty of obtaining adequate information having made it "impossible to make more than general observations concerning the hourly remuneration rate differences in the waterway industry."

The report's summary compares "weighted average hourly remuneration rates of Class I motor and railroad carriers," March of 1941 and year of 1940, respectively, in the following table:

Kind of Carrier and Carrier Relationship	Total All Districts	Eastern District	Western District	Southern District
Railroad	$0.78	$0.81	$0.77	$0.73
Bus	.75	.75	.80	.61
Truck	.68	.71	.67	.53
Bus above or below railroad	−4%	−7%	+4%	−16%
Truck above or below railroad	−13%	−12%	−13%	−27%

The average hourly remuneration rates were determined "by dividing the total compensation paid for a given period of time to a given craft or class of employees by the aggregate of elapsed time between 'signing in' and 'signing out.'" This method, the report contends, "gives proper weighting for overtime, special allowances, piece rates, penalty rates, and such other factors as may be concerned"—the "take home" hourly rate "is the more realistic measure of the hourly rate of income to the employee and the hourly cost of labor to the employer."

Before getting into these calculations, however, the report had asserted in its introduction that "to the extent that the various kinds of transportation do not pay equal wages for equal levels of work they are not competing under conditions of equal opportunity." Then, after noting, as did the Webb-Childe letter, that wages comprise the transportation industry's largest cost, it went on to say: "It seems altogether certain that the inequality of competitive opportunity inherent in unequal wage levels for equal job levels is potentially greater than inequalities which may exist by reason of subsidy and tax burden differences."

"Hiawatha" Carries 3,275,000 Passengers in Nine Years

During the nine years ending May 29, in which the "Hiawatha" of the Chicago, Milwaukee, St. Paul & Pacific has operated between Chicago and the Twin Cities, the afternoon sections have carried 3,275,000 paying passengers. In addition, the "Morning Hiawatha," which began service on January 21, 1939, has carried 1,440,000 paying passengers up to May 29. The "Midwest Hiawatha," which operates between Chicago and Omaha, Neb., and Sioux Falls, has carried more than 800,000 paying passengers since December 11, 1940.

New Record "Reefer" Performance in '43

By greater efficiency of use 64.4 per cent of miles are under load

Through increased efficiency of operation, railroad refrigerator cars in 1943 transported 41,630,387 tons of perishable freight—mostly fresh food products—representing an increase of 5,601,355 tons over 1942 and 12,822,847 tons over 1941, the Office of Defense Transportation has announced. This was done, it was explained, with far less refrigerator car equipment in operation.

Col. J. Monroe Johnson, director of the O. D. T., said that during 1943, refrigerator car service improved the loaded-empty mileage ratio by 13.8 per cent, raising the loaded performance to 64.4 per cent of the total mileage operated by refrigerator cars. Refrigerator cars averaged more miles a day in 1943 than in previous years. The daily average now is in the neighborhood of 80 miles, and in January of this year it reached an all-time high of 87 miles a day, the announcement pointed out.

"We have only to look back twenty years to realize what 80 miles a day means," Col. Johnson said. "Then an average figure of 30 miles a day for all freight cars was looked upon as visionary. Today we have increased the figure for all freight cars to 50 miles a day, and have reached over 100 miles a day for tank cars. Cooperation of shippers, carriers, and consignees is obtaining extraordinary results, not only in more efficient use of refrigerator cars, but in the entire movement of freight."

Some new types of refrigerator car equipment, which made their appearance in 1943, contributed in a measure to heavier loading, it was explained. They were the overhead ice bunker car and the end-ice bunker car, both of which provide approximately 20 per cent more loading space for many perishable products, particularly fresh vegetables, which require the ice to be placed on top of the load in the body of the car.

Service Records Resolution Reported to Senate

The Senate committee on interstate commerce has reported favorably to the Senate the House-approved House Joint Resolution 227 to extend until June 30, 1945, the period during which the Railroad Retirement Board may pay railroads for the work of bringing up to date the service records of prospective applicants for annuities under the Railroad Retirement Act.

O.P.A. Loses Another Supreme Court Case

Opinion upholds the I.C.C. on Hudson & Manhattan fares, honoring precedent

Remarking that "The rule of administrative law should not change because the shoe is on the other foot," the Supreme Court of the United States, in a majority opinion by Justice Jackson, pointed to numerous precedents for its decision upholding the action of the Interstate Commerce Commission in the Hudson & Manhattan fare case, in which Jersey City, N. J., city officials and the federal price administrator sought to have the entire proceeding reopened when the commission's original order allowing an increase was modified to permit a slight additional increase.

In case before the court, the commission and the railroad had appealed the decision of a three-judge statutory court favoring the contentions of the city and the price administrator. Justice Jackson spoke for five other members of the court, while Justice Douglas presented a separate opinion, with which Justice Murphy concurred. Justice Rutledge's dissent was noted, and Justice Black did not participate in the disposition of the case.

Price Law Doesn't Apply—As noted in *Railway Age* of August 14, 1943, page 291, the commission, upon further hearing, authorized the road to increase its Jersey City-New York fare to 10 cents or 11 tokens for one dollar, upon a showing that it would be impracticable to collect, on its so-called downtown line, the 9-cent fare previously approved. The 10-cent fare already was in effect on the "uptown" line, and the court proceedings were based on the action increasing the fare on the downtown line above 9 cents without, it was alleged, allowing objectors to present their case, since the matters under consideration at that stage of the proceedings had been limited by the commission. The price administrator claimed further that the commission's order increasing the fare above 8 cents—the rate at the time the so-called "hold the line" order was made effective—was in violation of the price stabilization law.

The divided lower court held against the commission, finding that it had denied the protestants a full hearing in refusing to reopen the proceeding to receive evidence relating to the 1943 earnings of the carrier, and also that it had "brushed aside too lightly the economic stabilization arguments." The effect of its findings, as Justice Jackson pointed out, was to continue in effect on the downtown line the 8-cent rate which the commission had held, after consideration of evidence, to be "clearly inadequate" in view of the road's increased operating costs and interest requirements.

When the railroad had sought to have an earlier commission order set aside by the court on the ground that the increase was insufficient, the court "refused to review the weight of evidence and held that being supported by evidence the judgment of the commission was final," he said. Just because the situation is now reversed, the commission having come to the road's relief, its judgment "is no less final," he pointed out, and the Supreme Court is disposed to maintain long-established precedents against reviewing such judgments.

O.P.A. Doesn't Supersede I.C.C.—Taking up the two points upon which the lower court opinion was based, the Supreme Court majority reviewed the argument that the entire proceeding should have been reopened to consider new evidence at the time the limited further hearing was allowed. "It has been almost a rule of necessity that rehearings were not matters of right, but were pleas to discretion . . . of the body making the order, and not that of a reviewing body," it said. Otherwise, the slow processes of administrative agencies would give litigants so many opportunities to ask rehearings on the ground that the record was "stale" that they could "stall the enforcement of the administrative order" almost at will. The consequence, then, the majority went on, is that "it is perfectly plain that unless the statutory authority of the price administrator gives him a different standing before administrative tribunals than can be claimed by private litigants there is no ground for holding that the denial of a rehearing constituted an abuse of discretion."

Turning to this phase of the case, Justice Jackson remarked that Congress could have transferred any part of the normal responsibilities of the commission to the price administrator, and so could have subjected the commission's rate orders to that official's veto or review. "But Congress

(*Continued on page 1091*)

Senate Group Favors $500 Million River Subsidy

The $66,000,000 Tennessee-Tombigbee project, voted down by the House before it passed its $361,000,000 omnibus rivers and harbors bill, H.R. 3961, was back again in the bill as reported last week from the Senate committee on commerce. The Senate committee also included an authorization for the expenditure of an additional $1,500,000 on the Beaver-Mahoning canal for which previous rivers and harbors bills had authorized the expenditure of $37,000,000.

The Senate committee's report explains that the bill, "a post-war planning measure," would now authorize 290 projects, estimated to cost the federal government a total of $498,784,931. Including Tennessee-Tombigbee and the additional amount for Beaver-Mahoning, the Senate committee added to the House bill 14 projects estimated to cost $110,166,400. Meanwhile, it eliminated two projects (Quinnipiac river, Conn., and Larchmont harbor, N. Y.) estimated to cost $887,000 and revoked a previous authorization of $2,300,000 for a seaplane basin, "not constructed and no longer needed," at Boston, Mass.

Latimer Explains New Social Insurance Bill

Describes its definitions and broadened coverage and benefit formulas

After a week-end interruption, the House interstate and foreign commerce committee on May 31 resumed its consideration of the proposed new Railroad Social Insurance Act, H. R. 4805, sponsored by the railway brotherhoods and the Railroad Retirement Board and introduced in the House May 15 by Representative Crosser, Republican of Ohio. Murray W. Latimer, chairman of the R. R. B., continued his section-by-section explanation of the provisions of the bill, pointing out significant departures from the existing statutes it is designed to replace.

As reported in *Railway Age* last week, the major features of the "liberalized" benefit and coverage sections of the bill had been outlined by David B. Robertson, president of the Brotherhood of Locomotive Firemen & Enginemen and spokesman for the unions on this measure, before Mr. Latimer undertook the burden of its advocacy before the committee. The framework of the latter's extended statement was developed in a 33-page document distributed to the committee, but his discourse on the bill's individual sections, interrupted at times by questions, went into much greater descriptive and analytical detail.

Takes the "Broad View"—The first section of the bill, he pointed out, is an attempt to write into the law the "broad view" of employer coverage which the board and the Bureau of Internal Revenue have been inclined to take, rather than the more restrictive view taken by the carriers and the Social Security Board. In general, Mr. Latimer conceded, the courts also have taken the narrower view. Because the social insurance law is a "statute of beneficent intent," and because the R. R. B.'s energies should be devoted not to controversy but to administration, he expressed the hope that the new definition of employer coverage would be sufficiently explicit to eliminate disagreements as to its intent. In addition to including certain additional categories of employers, such as freight forwarders, as previously noted in these columns, the employer coverage section of the bill is intended, he said, to provide for specific segregation of parts of an employer and reasonable rules to simplify determination of coverage in border-line cases, as when, for example, the Social Security Board or a state government has not been in agreement with the R. R. B. as to the application to certain activities of an employer of railroad retirement or carriers taxing legislation rather than that of the general social security laws.

In the course of his testimony Mr. Latimer was called upon to defend the incorporation in a single measure of the benefit and taxing provisions which had been kept separate in existing law, following a Supreme Court decision which was interpreted

as making such separation necessary. After pointing out that the Social Security Act, in which benefit and taxing provisions are similarly associated, had not been upset on such constitutional grounds, the witness asserted his belief that the "legal necessities" that prevailed when the original combined act was held unconstitutional are no longer controlling. In enacting this railroad social insurance legislation, he said, Congress would not be exercising its power to regulate interstate commerce; it would be exercising its powers to tax and to appropriate money. Some of the committee members nevertheless expressed some doubt as to whether all uncertainty as to the constitutionality of the measures as combined in a single law had been removed, and asked for further assurances on that point.

What Is "Employment?"—The bill's second section, defining employee coverage, sets up a simplification of the employment relation provisions now prevailing, Mr. Latimer indicated. By the end of 1943, he explained, the R. R. B. had formulated some 5,600 "rules and practices" covering determinations as to whether or not an employment relationship existed between an individual and an employer covered by the statute, in spite of which not a few inequities have persisted. By substituting the concept of integration into the employer's staff for the concept of subjection to the employer's authority, the position of certain groups of professional persons will be clarified, he said, while a broader statement of what constituted an employment relationship as of the effective date of the coverage provisions (August 29, 1935) is expected to take care of cases where employees on furlough at that time, perhaps only for short periods, but since reinstated, have been deprived of credit for prior service through the limitations of the existing law.

Mr. Latimer then discussed the expanded definition of "compensation" which the new bill includes. It would extend to payments for absence from service for any reason or for loss of earnings resulting from transfer to lower paid jobs. It also would include payments made by the employer for absence on account of sickness, disability, vacation, or any other absence, or for settlement of a personal injury claim. Certain limits on and exemptions from these provisions were mentioned, also, such as the provision that tips or voluntary payments by an employer of any taxes collectable from the employee will not be counted as compensation. Certain major accounting difficulties which the R. R. B. has encountered would be minimized by further provisions of the bill, the witness indicated, these being in the form of a system for reporting employee compensation on an annual basis.

As a corollary of the change of the definition of compensation to include compensation imputed to periods of absence by reason of work injuries, the definition of years of service is correspondingly altered, Mr. Latimer explained.

Disability Coverage Widened—Turning then to that part of the bill which deals with retirement and survivor benefits and prior service records, the R. R. B. chairman expressed the view that the disability provisions of the existing statute have proved to be too restrictive. To liberalize them, the bill would reduce from 30 years to 10 the service requirements for eligibility in cases of employees permanently and totally disabled for regular employment and make such employees eligible for full annuities at age 60 without regard to years of service. Annuities would be payable on a showing of permanent or total disability for the employee's regular occupation after he completes 20 years' service or reaches the age 60. The reduction of age annuities payable to persons who have been paid disability annuities but have recovered before reaching age 65 would be eliminated retroactively.

Another provision of the bill substitutes for the existing minimum annuity provisions a single formula applicable alike to age and disability annuities. This minimum is $3 multiplied by the number of years of service, or $50, or the average monthly compensation, whichever is the least. Such minimum annuity would be payable only to persons who are currently connected with the employer at the time the annuity is granted, and a new test for current connection is set up in the bill in terms of consecutive months of service.

More for Dependents—Because the "social" importance of dependency arising from death is "far greater," in Mr. Latimer's opinion, than would be indicated by the relatively small proportion of the board's disbursements for such purposes to its total disbursements—so far the percentage is 3.6, and by 1970, under existing law, would probably be about 8, it was estimated—the bill would eliminate the present lump sum death benefit and election of joint and survivor annuities and substitute a new provision for surviving dependents' annuities. Such benefits would be based on the combined earnings creditable under the railroad retirement statutes and the Social Security Act (title II), and would be payable if the employee met certain qualifications. Benefits to aged widows or dependent parents would be payable only if the employee was at death a "completely insured" person, as defined in the bill, such status being attained after 10 years' service or as otherwise specified. The widow of such an employee would receive survivor benefits after reaching age 65, and would not be eligible therefor if remarried. Where the widow is left with one or more dependent children under 18, such benefits would be payable before she reaches 65, however, subject to termination upon remarriage. Likewise, benefits would be payable to unmarried dependent children under 18, or to dependent parents over age 65 where there is no surviving widow or dependent child under 18. A lump sum benefit would be payable upon the death of an employee or annuitant who left no survivors entitled to these benefits, and a separate set of benefits would be provided to take care of survivors of certain annuitants and pensioners who failed to meet all the service requirements set up for complete insurance.

Mr. Latimer's explanation of the bill had not been completed when this issue of *Railway Age* went to press, and the committee hearings were continuing.

"Color Line" Cases Reach Supreme Court

The Supreme Court of the United States announced May 29 that it would review two lower court decisions involving alleged discrimination against railway employees on account of race by a union selected under the Railway Labor Act's provisions as the exclusive bargaining agent for the class of employees concerned. One case, that of *Steele* vs. *Louisville & Nashville*, involves a legal question of statement of cause as well as the duties of the union to minority members.

The other, that of *Tunstall* vs. *Brotherhood of Locomotive Firemen & Enginemen*, primarily involves the jurisdiction of the federal courts in such circumstances. In view of the Supreme Court's announcement of its probable adjournment for the summer on June 5, its consideration of these cases will be deferred.

A. A. R. Member Road Meeting on Pension Bill

Member roads of the Association of American Railroads will hold a special meeting at the Stevens Hotel, Chicago, on June 6. The meeting was called for the purpose of discussing the Wagner-Crosser bill embodying the railroad labor organizations' proposals for liberalizing the railroad retirement and railroad unemployment insurance systems. The proposals are now the subject of hearings before the House committee on interstate and foreign commerce, as noted elsewhere in this issue.

Money for Retirement and Mediation Boards

Appropriations totaling $311,316,000 for the Railroad Retirement Board and $607,000 for the National Mediation Board and National Railroad Adjustment Board are carried in the Department of Labor-Federal Security Agency Appropriation Bill for the fiscal year ending June 30, 1945, which was reported to the House on May 29 from the committee on appropriations.

The Retirement Board total includes an appropriation of $308,817,000 to the Railroad Retirement Account, representing the estimated fiscal 1945 collections under the Carriers' Taxing Act and adjustments for underestimates of prior years and credits for government payments for prospective annuitants during the period of their military service. The remaining $2,499,000 is for the Board's expenses in connection with the administration of the Railroad Retirement Act. It is the same as the estimate submitted by the Bureau of the Budget, but $55,000 less than the comparable figure for the current fiscal year. The Board also administers the Railroad Unemployment Insurance Act, but is not required to go to Congress for appropriations for that purpose. That act stipulates that all payroll tax collections under it shall be appropriated to the Railroad Unemployment In-

surance Account, save 10 per cent which is appropriated as an administration fund.

The Mediation Board-Adjustment Board total of $607,000 represents an increase of $80,000 above the $527,000 appropriated for the current fiscal year, but it is $46,500 less than the fiscal 1945 budget estimate. The principal reduction made by the committee was in the item for the salaries and expenses of National Railway Labor Panel emergency boards, which it cut from the budget figure of $100,000 to $65,000. The latter, however, is $15,000 more than the $50,000 appropriated for emergency boards in the current fiscal year.

Hobbs Offers New Version of Bankruptcy Bill

Representative Hobbs, Democrat of Alabama, has introduced H.R.4873, a revision of his proposal to so amend section 77 of the bankruptcy act as to restrict the Interstate Commerce Commission's authority in railroad reorganization proceedings. The original version, H.R.2857, was the subject of hearings last fall before the House judiciary committee's special bankruptcy subcommittee, where it was opposed by the commission, the Railroad Security Owners' Association, and the Railway Labor Executives' Association.

1943 Earnings of Intercity Truckers

Class I truckers operating in intercity service reported a 1943 net income after income taxes of $10,066,048, a decrease of 48.5 per cent below the $19,552,456 reported for 1942, according to the compilation for the year which has been issued by the Interstate Commerce Commission's Bureau of Transport Economics and Statistics. The compilation covers reports of 1,091 motor carriers.

They reported 1943 gross revenues of $637,045,893 compared with $593,193,322 in 1942.

The operating expenses were, respectively, $615,657,717 and $559,944,818. Tons of revenue freight transported by the common carriers in the group increased 14.2 per cent, from 68,512,086 in 1942 to 78,216,534 last year; but the traffic handled by contract carriers was meanwhile down 4.8 per cent, from 13,681,439 tons to 13,021,196 tons.

Average Loading Per Pullman 85 Per Cent Above 1941

The average loading per Pullman car currently is the highest in the company's history, 21.8 passengers or 85 per cent over the 1941 pre-war average of 11.5 passengers. This record loading, far beyond anything heretofore experienced, has been made possible by increased public cooperation, improvement in ticket office and reservation bureau procedures, and the special wartime refund tariff governing the redemption of unused tickets, according to E. P. Burke, passenger traffic manager.

"Regular travelers now know that no refunds may be made for unused Pullman tickets not cancelled in time for resale and use of the accomodations involved," Mr. Burke said. "Moreover, there is increased cooperation from travelers in buying only what they actually need and in cancelling far enough in advance to give other travelers a chance. The volume of travel is continuing to mount steadily, however, and in view of equipment and manpower shortages, the urgency of the cancellation problem remains.

A substantial amount of space continues to be lost through failure of ticket-holders to cancel reservations."

A. A. R. Directors Meet

In addition to routine matters, such as the manpower and equipment situations, the regular meeting May 26 of the board of directors of the Association of American Railroads reviewed the legislative situation arising from the relatively large number of bills affecting the interest of the railroads that are now before Congress, it was said. The meeting also was attended by Col. J. Monroe Johnson, director of the Office of Defense Transportation, Brig. Gen. Charles D. Young, deputy director, Henry F. McCarthy, assistant director, Homer C. King, executive assistant, and Holly Stover, federal manager of the Toledo, Peoria & Western.

The discussion of current conditions brought out the fact that the average "bank" of loaded cars awaiting unloading at all ports is now a 4.9-day supply, which is considered to be about the minimum safe "backlog" to meet shipping requirements without delay. This highly liquid port condition reflects a good car situation at all ports, it was explained, and indicates that no tendency toward an unnecessary accumulation of unloaded cars has been permitted to develop.

C. & E. I. Box Cars Aid "SPAR" Recruiting

To aid "Spar" recruiting, the Chicago & Eastern Illinois has stenciled in large letters on four box cars the reminder, "Don't be a spare—be a Spar." The first of the cars was "launched" at ceremonies in the Dearborn Street station annex at Chicago on May 20, when enlisted Spars and a recruiting officer for the Coast Guard Women's Reserve participated in the "christening."

Spar Yeomen, Third Class, Marge Small of Redondo Beach, Cal., (left), Wielding the Christening Bottle, and Mary Joan Demarinis of Hoboken, N. J. Participated in the "Launching"

C. T. O'Neal, president of the railroad, who helped arrange for the event, pointed out that the "launching" of the box cars "will carry on this railroad's policy of aiding vital wartime campaigns." For more than two years, box cars and passenger coaches of the line have carried a "Buy More War Bonds" message along the road's own right-of-way, to all corners of the country and to several Canadian provinces. "These cars," Mr. O'Neal said, "in addition to lending assistance to essential national drives, are helping the war effort further by transporting tons of needed wartime freight to destinations everywhere."

Discontinue Delaware River Weekend Bridge Trains

The Pennsylvania, the Reading and the Pennsylvania-Reading Seashore Lines, on May 31, announced that train service between Philadelphia, Atlantic City and other seashore points, via the Delaware River Bridge route, will again be discontinued on Saturdays, Sundays and holidays, from June 17 through September 16, to provide on those days added cars and locomotives for military and essential civilian travel.

This equipment will be transferred to lines operating out of Camden, with ferry connections at Market Street Wharf, Philadelphia, and will furnish over week-ends and holidays, an additional number of ferry route trains to and from the shore, as was done in 1943.

During the three-month period, seashore trains usually operated from and to Broad Street Station, Pennsylvania Station—30th Street and North Philadelphia will be generally represented in the augmented week-end schedules of seashore trains running from and to Camden. The railroads will continue to operate trains over the bridge route Mondays through Fridays during the summer, except on holidays, with one round-trip scheduled for Atlantic City commuter travel on Saturdays.

Railroad officers pointed out that the mileage saved on the Camden route, together with the simpler operation and quicker turn-around, will enable the equipment to provide at least one-third more service than would be possible over the bridge route.

I. C. C. Valuation Funds Cut Again to $500,000

The conference report on the Independent Offices Appropriation Bill for the fiscal year ending June 30, 1945, brings the appropriation for the Interstate Commerce Commission's Bureau of Valuation back to the $500,000 approved by the House. The amount was raised by the Senate to $655,000, but this was one of the items on which the Senate conferees receded.

The $655,000 had been recommended by the Bureau of the Budget, and the commission made elaborate presentations on that basis before the Congressional appropriations committees. The committees declined to approve more than $500,000, but the $655,000 figure nevertheless went in upon motion of Senator LaFollette, Progressive of Wisconsin, while the bill was under consideration

in the Senate. Commissioner Miller told the Senate appropriations committee that the reduction to $500,000 "will cut the guts out of" the Bureau of Valuation's staff.

As agreed to by the conferees, the total fiscal 1945 appropriation for the I.C.C. is thus $9,171,700 or $10,000 less than approved by the House. The conferees accepted also that Senate amendment which eliminated from the appropriation for motor transport regulation an item of $10,000 proposed for the purchase of seven passenger motor vehicles.

Freight Car Loading

Carloading reports were so delayed by the Memorial Day holiday that the Association of American Railroads had not announced the total for the week ended May 27 when this issue went to press.

Loading of revenue freight for the week ended May 20 totaled 871,105 cars, and the summary for that week, as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week Ended Saturday, May 20

District	1944	1943	1942
Eastern	164,792	163,113	158,001
Allegheny	198,590	186,738	184,876
Pocahontas	55,450	56,992	55,605
Southern	123,439	121,707	125,018
Northwestern ..	133,230	129,743	137,429
Central Western	121,718	117,205	112,652
Southwestern ..	73,886	68,344	64,095
Total Western Districts	328,834	315,292	314,176
Total All Roads	871,105	843,842	837,676
Commodities			
Grain and grain products	40,640	42,929	34,412
Live stock	14,484	13,334	12,853
Coal	176,870	166,812	165,998
Coke	14,851	14,245	14,166
Forest products	46,836	44,645	48,410
Ore	86,779	84,003	87,205
Merchandise l.c.l.	104,381	96,834	96,293
Miscellaneous ..	386,264	381,040	378,339
May 20	871,105	843,842	837,676
May 13	868,309	849,032	839,054
May 6	836,978	816,538	839,286
April 29	851,857	788,789	858,911
April 22	839,954	794,163	861,357
Cumulative Total, 21 Weeks....	16,736,141	16,095,374	16,882,125

Senate Hearings June 8 on Land-Grant Repeal

Senator McFarland, Democrat of Arizona, is chairman of a subcommittee of the Senate committee on interstate commerce which Chairman Wheeler of the committee has appointed to consider H. R. 4184, the House-approved Boren bill for repeal of remaining provisions of the land-grant-rate law. Other members of the subcommittee are Senators Johnson of Colorado, Stewart of Tennessee, Democrats, Austin of Vermont, and Shipstead of Minnesota, Republicans. Hearings on the bill will begin June 8, Senator McFarland announced this week.

In Canada.—Carloadings for the week ended May 20 totaled 71,233, as compared with 72,612 for the previous week, and 67,670 for the corresponding period last year, according to the compilation of the Dominion Bureau of Statistics.

Total for Canada	Total Cars Loaded	Total Cars Rec'd from Connections
May 20, 1944	71,233	39,028
May 13, 1944	72,612	41,362
May 6, 1944	70,948	39,578
May 22, 1943	67,670	39,293
Cumulative Totals for Canada		
May 20, 1944	1,372,680	796,176
May 22, 1943	1,251,021	783,929
May 23, 1942.....	1,260,189	645,937

B. & O. Invites Industries to Its Territory

The Baltimore & Ohio, through its Commercial Development department, has surveyed, analyzed and catalogued hundreds of industrial sites within its territory. In a smartly illustrated 56-page brochure called "A Lion's Share," it now invites the attention of industrialists who are responsible for selecting new plant locations.

Terming that section of the country through which its lines pass, "The Heart of Industrial America," the railroad promises a "lion's share" of raw materials, power, labor and markets for industries seeking plant sites there.

There are included impressive full-page illustrations depicting resources, a section devoted to power, another to labor, markets and transportation, as well as maps in color, showing the areas of the 48 states drawn proportional to their 1940 populations, and a geographically correct map of the northeastern United States, indicating B. & O. lines.

"Come blow your whistle with ours!" the railroad invites.

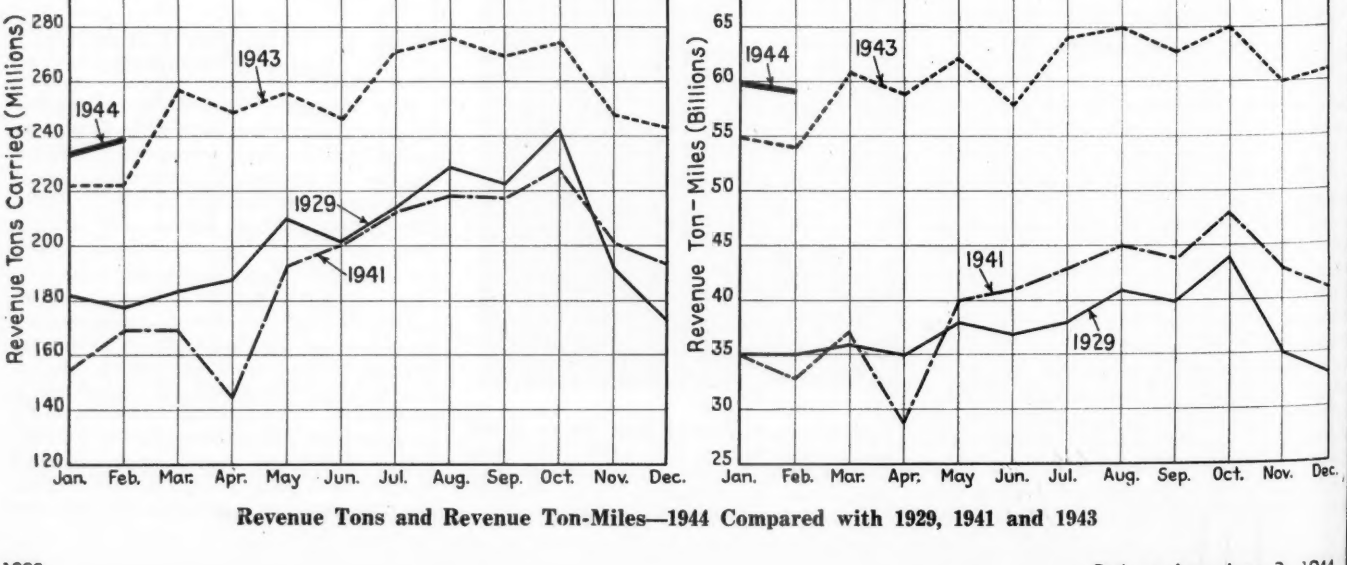
Train Communication—A Correction

An article describing operations in the Galesburg, Ill., yards of the Chicago, Burlington & Quincy, which was published in the May 13, 1944, issue of *Railway Age*, states: "All train movements in the sorting operations are controlled by radio between the locomotives and the hump office." The system used is not radio but is the inductive yard communication system made by the Union Switch & Signal Company, Swissvale, Pa. This communication system is private and is confined closely to the tracks and wayside wires used as carriers. It cannot be tuned in by ordinary radio sets.

I. C. C. Service Orders

Interstate Commerce Commission Service Order No. 210, effective May 28, requires railroads supplying refrigerator cars for the loading of Florida citrus fruit to provide cars equipped for half-stage icing where practicable without additional switching service, if such cars are available, and limits the icing of such cars to half-stage icing. Other refrigerator cars loaded with Florida fruits and vegetables and refrigerator cars loaded with vegetables originating in Georgia, South Carolina or North Carolina, may be initially iced or reiced only to three-fourths of bunker capacity, under other provisions of the same order.

Service Order No. 206, effective May 12, directed the Long Island to unload immediately 10 carloads of coal held an undue



Revenue Tons and Revenue Ton-Miles—1944 Compared with 1929, 1941 and 1943

ength of time at Patchogue, Riverhead and Bayport, N. Y. First Revised Service Order No. 205, effective May 24, modified the requirements of that order with respect to the initial icing of refrigerator cars loaded in the Salinas-Watsonville district of California to permit this to be done by the Western Pacific at Stockton or San Jose, Calif., as well as by the Southern Pacific at Roseville, Calif.

The prohibition against the use of any freight or refrigerator cars for the movement of potatoes below a prescribed minimum grade which was effected by First Revised Service Order No. 197 was terminated May 29 by Service Order No. 197-A. Service Order No. 200, prohibiting the reicing of refrigerator cars loaded with potatoes, which was effective April 24, has been modified by Amended Service Order No. 200, effective May 30, which makes the prohibition apply only to cars loaded with potatoes originating in certain states, but extends the prohibition as to those states to initial icing also. The states affected are North Carolina, Virginia, West Virginia, Maryland, Pennsylvania, Delaware, New Jersey, and Long Island points in New York.

Roundtable on Transportation Libraries to be Held

A roundtable discussion on the organization and development of transportation libraries will be held by the Transportation Group of the Special Libraries Association at the Benjamin Franklin Hotel in Philadelphia, Pa., on Tuesday morning, June 20. The leaders will be Miss Elizabeth White, librarian, Capital Transit Company; Mrs. Annie Shelor Wright, librarian, United States Maritime Commission; Miss Margaret Talbott Stevens, research librarian, Baltimore & Ohio, and Adrian A. Paradis, office manager, department of economic planning, American Airlines, Inc. At the luncheon to follow, J. V. B. Duer, assistant to vice-president of the Pennsylvania, will speak on "Railroad Transport—War and Postwar."

Rock Island Gets Permits for Radio Stations

The Federal Communications Commission on May 30 granted applications of the Chicago, Rock Island & Pacific for four construction permits for experimental Class 2 radio stations to be used in conducting tests of radio communication under actual operating conditions in the railroad yards and on trains in Chicago and west to Lincoln, Nebr.

The Rock Island, the F.C.C. announcement said, "has informed the commission that an actual program of experimentation will be undertaken to develop factual information regarding the use of very high frequency circuits and systems as a means of providing communication between the following points in railroad service: (1) End-to-end of trains; (2) two-way yard-to-trains, engines or cabooses; (3) two-way yard-to-yard; (4) two-way dispatcher-to-trains, engines or cabooses; (5) two-way brakeman or flagman-to-trains, engines or cabooses."

Radiotelegraph and radiotelephone emission is authorized, including the use of both amplitude modulation and frequency modulation. Frequencies authorized are within the bands 30 to 40 megacycles and 100 to 400 megacycles, with a maximum power of 10 watts.

The announcement further pointed out that since these stations will be operated at fixed locations, as well as on moving trains, it was necessary for the applicant to request construction permits, inasmuch as stations on railroad rolling stock only may be licensed without the stations having been previously authorized under construction permits.

Recent Tests on L. N. E. R. See Train Telephones for Travelers

A further stage in experiments with radio telephone apparatus has been reported by the London & North Eastern. This railroad, in collaboration with Rediffusion, Ltd., some months ago experimented successfully with radio telephone apparatus permitting engine crews and trainmen of freight trains to converse en route. More recently, Sir Ronald Matthews, chairman of the L. N. E. R., seated in his office at a London terminus, conversed by radio telephone with Sir Charles Newton, chief general manager, who was traveling north on the East Coast main line in a specially-equipped train.

The railway reports reception both ways to have been "very satisfactory." During the experiments, contact was made via three different trunk telephone exchanges of the railroad.

C. N. R. and Subsidiaries Set Record in War Bonds

A new high record in Victory Loan subscriptions—$29,670,100—was established by the employees and management of the Canadian National Railways and its airlines and munitions subsidiaries, in Canada's Sixth Victory Loan campaign just terminated.

From the employees of the railways, Trans-Canada Air Lines and National Railways Munitions Limited, 82,368 individuals bought bonds valued at $9,127,100, representing an average subscription of $110.81. Railway management subscribed $20,543,000. Employee figures represent an 87.6 per cent participation. Subscriptions from all sources in the C. N. R. during the six drives have now reached an overall total of $118,230,200. Of this amount $82,178,500 has been subscribed by the company, and individual purchases now total $36,051,700.

"Zephyr's" Tenth Anniversary Celebrated

A resumption of the construction of lightweight passenger cars and the application of Diesel-electric power to freight and passenger service after the war was forecast at luncheons held in Denver, Colo., and Chicago on May 25 and 26 to commemorate the tenth anniversary of the dawn-to-dusk run of the Burlington's pioneer "Zephyr" from Denver to Chicago. The speakers at the Denver luncheon included Ralph Budd, president of the Burlington; H. L. Hamilton, vice-president of the Electro-Motive Division of the General Motors Corporation; and Thomas Wagner, district sales manager of the Edward G. Budd Manufacturing Company; while those at the Chicago luncheon included Mr. Budd, Mr. Hamilton and Edward G. Budd, president of the Edward G. Budd Manufacturing Company.

Ralph Budd said that while the number of modern type passengers cars on the railroads is still small and there is a great field before us, "what we do in the future will depend to a very large extent on the public policies which are adopted and put into effect by legislation and regulation, and the extent to which the railroads are encouraged and permitted to go forward and develop under private enterprise the possibilities of railroad travel."

Mr. Edward Budd also anticipated an increase in the use of lightweight cars. "A new era has come to the railroads," he said. "They won't monopolize travel as they did 30 years ago. With the new type of trains, a new sensation has been introduced in railroad travel. The new trains maintain the old advantage they had in the competitive travel field and have some new advantages. The older rolling stock of the railroads is of a type which was designed 40 years ago and 53 per cent of the cars now running were built more than 25 years ago. Think for a minute what else we use which was designed 40 years ago. These were great cars when they were built but their time is done now. With the ending of the war, great numbers of the new type cars will be built. The passenger will be able to travel rapidly, smoothly and safely in a well-ventilated car. A ride across the desert will have lost all its terrors. The replacing of the old rolling stock by new rolling stock will keep all of us carbuilders busy for years to come."

Mr. Hamilton, in tracing the development of the Diesel locomotive, said that the development of the Diesel locomotive to date makes it a tool for the post-war period which is qualified and in step with the latest technical developments in any of the industries. "It will certainly put the railroads on a par with the automotive industry and the competition it might supply," he said.

Rock Island 1943 Income Largest in History of Road

The 1943 income of the Chicago, Rock Island & Pacific was the largest in the history of that railroad, according to a report for 1943, made to the Federal District Court by the trustees on May 23.

After the payment of interest and after providing $21,100,000 for federal income taxes, the report states, a net income of $37,037,708 was shown. In comparison with the preceding year, the 1943 net increased $1,925,015, while in comparison with the previous all-time peak year of 1929, the net railway operating income for 1943 increased $11,946,074 or 48 per cent.

Freight revenues of $123,264,017, passenger revenues of $40,018,856, and total railway operating revenues of $176,644,686 for the year 1943 are peak revenues for all time, the trustees pointed out. Freight and total operating revenues increased over the previous peak year of 1929 by $9,666,980, or 8.5 per cent, and $28,923,124, or 19.6 per cent, respectively. Passenger revenues in-

creased over the previous peak year of 1920 by $4,545,918, or 12.8 per cent.

The transportation cost of handling the increased volume of business in 1943 was $1,596,831 less than in 1929, and total operating expenses were $3,580,279 less than in 1929, despite substantially higher wages in 1943 and not withstanding taxes in the year 1943 aggregating a total of $29,090,642, as compared with $8,212,087 for 1929. The report of the trustees further stated that the total tons of revenue freight moved one mile in 1943 were 14,126 million, 21 per cent over 1942 and the largest in the history of the railroad. The number of revenue passengers carried in 1943 was 15,467,000, 26 per cent over 1942.

It was also pointed out that it was only because of the increased tonnage that freight revenues for the year established an all-time peak, for the revenue per ton mile derived therefrom was the lowest it had been for a number of years, decreasing from 1.15 cents per ton mile in 1929 to 0.87 cents in 1943.

The total principal payments made during the year by the Rock Island amounted to $8,654,000 and reduced the outstanding equipment indebtedness as of December 1, 1943, to $11,974,000.

The increases in wages resulted in an increase in 1943 operating expenses and payroll taxes of $4,189,535. By reason of the higher wages now in effect, the increase in the payrolls and payroll taxes for the calendar year 1944 is estimated to approximate $7,450,000.

The most important project undertaken during the year, the trustees stated, was the change of line and grade reduction on the main Chicago-California route between Eldon, Iowa and Perlee, a distance of approximately 23 miles at a cost of $2,450,000, which it is anticipated will be completed for service the latter part of this year. The project is part of a program involving line relocation and grade reduction shortening the distance between Chicago and Kansas City, Mo.

The trustees also stated that an agreement had been reached with the trustees of the Chicago, Milwaukee, St. Paul and Pacific for the joint construction and ownership of a new bridge across the Missouri river at Kansas City and a new connecting line of railroad between Birmingham, Mo., and Kansas City. All of the grading for the project and about 85 per cent of the piers and abutments for the bridge were completed in 1943. When the new facilities are completed, they will afford a shorter route to Kansas City for both passenger and freight trains, and will also provide a direct entrance for passenger trains into the Kansas City station.

Water Carrier Revenues in 1943

Classes A and B water carriers reporting to the Interstate Commerce Commission had 1943 freight revenues of $1,472,191 and passenger revenues of $11,792,324, increases respectively of 3.3 per cent and 33.3 per cent above 1942. Classes A and B embrace all reporting water carriers with annual operating revenues of more than $100,000.

The compilation, Statement No. Q-650, prepared by the commission's Bureau of Transport Economics and Statistics, shows the 1943 freight revenues of Great Lakes and Pacific Coast groups were down 6.6 per cent and 8.2 per cent, respectively, from 1942. Meanwhile the Atlantic and Gulf Coast and tht Mississippi River and Tributaries groups, in turn, reported increases of five per cent and 9.3 per cent.

All groups reported increased passenger revenues, the range being from 13.1 per cent for the Mississippi and Tributaries group to 65.4 per cent for the Great Lakes group. No data of any kind are shown for the intercoastal group, a footnote explaining that all such service has been suspended.

Barnard Named to I. C. C.

George M. Barnard, member of the Indiana Public Service Commission, has been appointed by President Roosevelt to be a member of the Interstate Commerce Commission for the unexpired term of the late Joseph B. Eastman. The term runs nearly the full seven years, expiring December 31, 1950; Mr. Eastman had been reappointed only a couple of months before his death.

The Barnard appointment went to the Senate for confirmation on May 31. The appointee is a Republican, the present line-up of the commission being such that the President was required to name someone who was not a Democrat. He was first appointed to the Indiana commission in 1921 but resigned after about a year to enter the practice of law. He was again appointed in 1941, and has served continuously since that time.

"Railroadians" to Hear Slattery

"British Railways at the Battle Fronts" will be the subject of an address by T. D. Slattery, general traffic manager, Associated British & Irish Railways, New York, when he speaks before the next regular meeting of the Railroadians of America June 9. The meeting is scheduled for 7:30 p. m., in the Auditorium of the Pennsylvania Railroad Y. M. C. A., Pennsylvania Station, New York.

The British-made railway film, "A Study in Steel," will be a further feature of the program.

Halves Proposed Post-War Highway Expenditures

Representative Robinson, Democrat of Utah, chairman of the House committee on roads, has introduced H. R. 4853 which cuts in half the expenditures for post-war highways which he previously proposed in H. R. 2426. Thus the new bill would authorize the expenditure of $1,500,000,000 to become available at the rate of $500,000,000 for each three successive post-war years.

Its introduction followed upon the hearings held on H. R. 2426, which had called for expenditures totaling $3,000,000,000 at the rate of $1,000,000,000 a year. The new bill's provision with respect to grade crossings stipulates that "the entire cost of construction projects for the elimination of hazards of railway-highway crossings may be paid from federal funds, except that not more than 50 per centum of the right-of-way and property damage costs, paid from public funds, on any such project, may be paid from federal funds."

Meanwhile, however, the $3,000,000,000 proposal is still pending since a bill along those lines has been introduced by Representative Mott, Republican of Oregon, one of the roads committee's minority members. It is H. R. 4811.

Representation of Employees

The Brotherhood of Railroad Signalmen of America has supplanted the International Brotherhood of Electrical Workers, operating through the Railway Employees Association, American Federation of Labor, as the Railway Labor Act representative of the Virginian's signal department employees, including signal foremen, signal maintainers, signalmen, assistant signal maintainers, and helpers. The certification was made by the National Mediation Board after a check of authorization cards showed that the brotherhood had the signatures of 12 of the 13 employees eligible to chose representatives.

Meanwhile the Brotherhood of Maintenance of Way Employees has met a challenge from the Alabama-Florida Trackmen's Association and retained its right to represent maintenance of way employees of the Atlanta & St. Andrews Bay.

Georgia to Sue for Equalized Rail Rates

On May 27, Governor Ellis Arnall of Georgia directed the attorney general to institute a suit before the United States Supreme Court against such railroads and citizens of other states as may be necessary and proper "for the purpose of correcting wrongs and injustices to the State of Georgia" by the "prevailing unconstitutional, discriminatory and illegal freight rate system."

Governor Arnall charged that the Interstate Commerce Commission had condoned the practice of interstate rail carriers "prescribing and collecting charges for hauling commodities within 'official' and 'Southern territories.'" Preferential rates to other territories, he declared, have worked to the detriment of Georgia by turning trade from its ports to other ports with lower freight rates. The governor asserted that the state-owned Western & Atlantic from Atlanta, Ga., to Chattanooga, Tenn., has been "irreparably damaged because of the illegal, unconstitutional and preferential rate system which has lessened and will continue to lessen the establishment of industry" along its route. The governor's order read in part, "The prevailing discriminatory freight rate system impeding the development of the South should be ended and the trade barriers erected against the South should be abrogated."

New C. N. J. Ad Series

With special emphasis on its efforts to "speed war goods to the fighting fronts," the Central of New Jersey has begun an advertising campaign in New Jersey and eastern Pennsylvania newspapers located in the territory which it directly serves.

First in the series is "Route to Berlin." Therein it is stated that "When you measure a railroad in terms of activity and strategic importance to the war effort, you will see

why the Jersey Central is a vital part of the route to Berlin," for, it continues, "Jersey Central tracks link the coal, oil and steel centers of Pennsylvania, the industrial area of northern New Jersey and outward-bound cargo ships at the Port of New York."

Second in the set is "100 Times Around the World!" "Upwards of three million miles a year is the distance traveled by Jersey Central freight trains—more than one hundred times around the world," and, more than 28,000 carloads of freight of all kinds is the railroad's weekly average for warfront as well as most civilian needs, it is reported.

McCarran Air Transport Plan Now in Two Bills

Senator McCarran, Democrat of Nevada, has introduced a separate bill to cover each of his pending proposals to establish a new regulatory set-up for air transportation and to create a federally-chartered private airline with a monopoly of American operations in the field of international transport. The former would now be provided under S.1949, and the latter under S.1950.

As noted in the *Railway Age* of March 25, page 620, both proposals are embodied in S.1790 which Mr. McCarran introduced previously. In proposing the separate measures, he wanted it understood that they make no change in his plans as outlined in the original bill.

Reports Bill Proposing I. C. Act Amendments

The Senate committee on interstate commerce has reported favorably to the Senate S.1473, the bill introduced last year by Chairman Wheeler of the committee, to amend the Interstate Commerce Act in various respects as suggested by the Interstate Commerce Commission. The report states that the bill as reported is "noncontroversial."

It proposes to give the commission authority to prescribe rules for the extension of credit by express companies, and to give it the same emergency powers over water carriers that it now has with respect to railroads and motor carriers. Other provisions would clarify the commission's authority with respect to examining accounts of companies furnishing railroads with cars or protective services to perishable freight against heat or cold; and amend present provisions covering the service of notice in commission proceedings.

O. D. T. Consolidates Its Highway Transport Activities

Establishment of a Highway Transport Department within the Office of Defense Transportation became effective June 1, resulting from consolidation of the Divisions of Motor Transport and Local Transport, which already had been closely associated through the assignment of Guy A. Richardson, assistant director of O. D. T., to supervision of the two divisions. In announcing the change May 26, O. D. T. Director J. Monroe Johnson said the reorganization should "go far toward the elimination of duplication, provide a more uniform approach to the solution of common problems, and clarify the relationships of the public, the carriers, and the Office of Defense Transportation."

The new department consists of five divisions. The Property Operations Division, of which Harold C. Arnot is director, includes sections dealing with for-hire carriers, private carriers, farm vehicles, and traffic and vehicle registration. The Passenger Operations Division, with Edward A. Roberts as director, includes transit, intercity bus, school bus, and taxicab sections. The Equipment and Research Division, with W. S. Rainville, Jr., as director, includes sections dealing with allocation, maintenance, and program. Ernest Jacobson is director of the Management Division, which includes contract clearance, inventory statistics, and administrative sections. The director of the Regional Division is Thomas H. Nicholl and the assistant director is Alvin S. McEvoy; this division's activities are handled by regional directors located at New York, Philadelphia, Pa., Atlanta, Ga., Cleveland, O., Chicago, Kansas City, Mo., Dallas, Tex., Denver, Colo., and San Francisco, Calif.

Trainmen and Engineers Have Not Settled Vacations Case

Failure of the Brotherhood of Railroad Trainmen and the Brotherhood of Locomotive Engineers to accept promptly President Roosevelt's advice that they return to Railway Labor Act procedures has delayed the settlement of their dispute with the carriers regarding conditions under which their members are to be awarded vacations with pay. These unions, which accepted President Roosevelt as the arbitrator of the year-end wage case, also took their dispute on the vacations phase to the White House, while the Brotherhood of Locomotive Firemen and Enginemen, the Order of Railway Conductors and the Switchmen's Union of North America, entered an arbitration agreement out of which came the settlement reported in the *Railway Age* of May 27, page 1036.

As noted there, it had been thought that President Roosevelt's May 17 letter interpreting his vacations award laid the basis for a like settlement with the B. of R. T. and the B. of L. E. Those unions, however, sought further conferences with the President; although his letter had indicated his desire to have any remaining dispute about the matter "arbitrated in accordance with the Railway Labor Act." The President's response to the request for further conferences was another suggestion that Railway Labor Act procedures be resorted to; and the carriers promptly advised the White House that they were ready to proceed in that manner. Up until Wednesday, there was no indication that the unions were yet ready to do likewise.

O. P. A. Loses Another Supreme Court Case

(*Continued from page 1085*)

did no such thing," he pointed out, and he quoted an earlier opinion by Justice Douglas to the effect that "the administrator does not carry the sole burden of the war against inflation."

"The Interstate Commerce Commission has responsibility for maintaining an adequate system of wartime transportation," the court's majority opinion went on to say. "It is without power to protect these essential transportation agencies from rising labor and material costs. It can decide only how such unavoidable costs shall be met. They can in whole or in part be charged to increased fares, or they can be allowed to result in defaults and receiverships and reorganizations, or they may be offset by inadequate service or delayed maintenance. All of these considerations must be weighed by the commission with wartime transportation needs as well as avoiding inflationary tendencies as a public responsibility."

Douglas Sides With O.P.A.—The separate opinion by Justice Douglas conceded that the majority's view followed precedent, especially that recently established in the so-called Washington Gas Light case (reviewed in *Railway Age* of April 1, page 653), and for that reason did not take the form of a dissent. But Justice Douglas emphasized his own disagreement with that precedent, asserting that the commission had granted the rate increase on the basis of peacetime standards, disregarding the intention of Congress that wartime "general rate increases were not to be allowed unless, for example, it was shown that they were necessary to preserve existing facilities under war conditions." The majority's interpretation of the commission's wartime duty, he said, would "pretty well emasculate" the stabilization act's prohibition of "any general increase" in rates without notice to the Price Administrator and without allowing his intervention in the proceedings.

Status of Tulsa Union Depot

The Interstate Commerce Commission, Division 1, has instituted an investigation to determine whether the Tulsa Union Depot Company "is a common carrier subject to part I of the Interstate Commerce Act or a lessor as defined in section 20(8) thereof." The order states that a question with respect to the matter has arisen under section 20.

The proceeding is docketed as No. 29145 and hearings will be held in Washington, D. C., on June 29 before Examiner Hosmer.

Roads' Labor Shortage Totaled 107,000 on May 1

Personnel needs of the railroad industry amounted to 107,000 persons on May 1 compared with 108,000 on April 1 and 90,000 on May 1, 1943, according to the United States Railroad Retirement Board. This figure for the entire industry is based on reports from 194 employers. Although there were more jobs unfilled than a month earlier in four of the six geographical areas, a decrease of about 9 per cent in needs around the Great Lakes and in the Southeast resulted in a smaller total.

Additional labor needs became smaller in four of the occupational groups. The sharpest drop from the preceding month occurred in the needs for trainmen and enginemen. While the overall decrease in needs for additional laborers was relatively small, there were relatively large reductions in the needs for shop laborers and freight handlers which were partially offset by a larger reported need for additional track laborers.

The larger additional needs for helpers

and apprentices reflect increased needs for signalmen helpers and bridge and building helpers. Needs for helpers and apprentices in the shops were in general somewhat smaller as were also the needs for skilled shopmen.

Personnel Needs of Employers Reporting for Both April and May[1] May 1, 1944

	Needs reported		
	Number	Percent of total	Percent of April
1. Executives, professional men, telegraphers, and clerks	4,379	4.3	104.1
2. Trainmen and enginemen	6,661	6.6	88.0
3. Skilled trades journeymen	14,352	14.2	99.3
4. Skilled trades helpers and apprentices	14,101	14.0	104.3
5. Laborers	58,850	58.3	98.9
6. Attendants, cooks, porters, and waiters	1,726	1.7	117.3
7. Miscellaneous	902	0.9	89.2
Total	[1]100,971	100.0	99.2

[1] The total of personnel needs reported in this table is smaller than the number mentioned in the text above since it excludes the needs of those employers who did not also report for April.

Meetings and Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings:

ALLIED RAILWAY SUPPLY ASSOCIATION.—J. F. Gettrust, P. O. Box 5522, Chicago 80, Ill.

AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS.—E. P. Soebbing, 1450 Railway Exchange Bldg., St. Louis, Mo.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—B. D. Branch, C. R. R. of N. J., 143 Liberty St., New York 6, N. Y.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—Miss Elinor Heffern, Room 839, 310 S. Michigan Ave., Chicago 4, Ill. Annual meeting May 8-10, 1945, Hotel Stevens, Chicago, Ill.

AMERICAN ASSOCIATION OF RAILWAY ADVERTISING AGENTS.—E. A. Abbott, Poole Bros., Inc., 85 W. Harrison St., Chicago, Ill.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—Miss Elinor Heffern, Room 839, 310 S. Michigan Ave., Chicago 4, Ill. Annual meeting, October 17-19, 1944, Hotel Stevens, Chicago, Ill.

AMERICAN RAILWAY CAR INSTITUTE.—W. C. Tabbert, 19 Rector St., New York 6, N. Y.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—J. B. Lanctot, Canadian National Rys., E. 811 First National Bank Bldg., St. Paul, Minn. Next meeting, December 14-15, 1944, Palmer House Club Bldg., Chicago, Ill.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in cooperation with the Association of American Railroads, Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 13-15, 1945, Palmer House, Chicago, Ill.

AMERICAN RAILWAY MAGAZINE EDITORS' ASSOCIATION.—Page N. Price, Norfolk & Western Magazine, Roanoke, Va.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—W. R. Stough, Jr. (Ass't Secy.-Treas.), Tower Bldg., Washington 5, D. C.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—C. E. Davies, 29 W. 39th St., New York 18, N. Y. Semi-annual meeting, June 19-22, 1944, William Penn Hotel, Pittsburgh, Pa.
Railroad Division.—E. L. Woodward, Railway Mechanical Engineer, 105 W. Adams St., Chicago 3, Ill. Semi-annual meeting, June 20, 1944, William Penn Hotel, Pittsburgh, Pa.

AMERICAN TRANSIT ASSOCIATION.—Guy C. Hecker, 292 Madison Ave., New York 17, N. Y.

AMERICAN WOOD-PRESERVERS' ASSOCIATION.—H. L. Dawson, 1427 Eye St., N. W., Washington 5, D. C.

ASSOCIATED TRAFFIC CLUBS OF AMERICA, INC.—R. A. Ellison, Cincinnati Chamber of Commerce, 1203 C. of C. Bldg., Cincinnati 2, O.

ASSOCIATION OF AMERICAN RAILROAD DINING CAR OFFICERS.—F. R. Borger, C. I. & L. Ry., 836 S. Federal St., Chicago 5, Ill.

ASSOCIATION OF AMERICAN RAILROADS.—H. J. Forster, Transportation Bldg., Washington 6, D. C.
Operations and Maintenance Department.—Charles H. Buford, Vice-President, Transportation Bldg., Washington 6, D.C.
Operating-Transportation Division. — L. R. Knott, 59 E. Van Buren St., Chicago 5, Ill.
Operating Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.
Transportation Section.—H. A. Eaton, 59 E. Van Buren St., Chicago 5, Ill.
Fire Protection and Insurance Section.—W. F. Steffens, New York Central, Room 3317, 230 Park Avenue, New York 17, N. Y.
Freight Station Section.—N. Kaplan, 59 E. Van Buren St., Chicago 5, Ill.
Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.
Protective Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.
Safety Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.
Telegraph and Telephone Section.—W. A. Fairbanks, 30 Vesey St., New York 7, N. Y.
Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 13-15, 1945, Palmer House, Chicago, Ill.
Construction and Maintenance Section.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 13-15, 1945, Palmer House, Chicago, Ill.
Electrical Section.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill.
Signal Section.—R. H. C. Balliet, 30 Vesey St., New York 7, N. Y. Annual meeting, October 4-5, 1944, Hotel Stevens, Chicago, Ill.
Mechanical Division.—Arthur C. Browning, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, June 23-24, 1944, Jefferson Hotel, St. Louis, Mo.
Electrical Section.—J. A. Andreucetti, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, October 12-13, 1944, Hotel Sherman, Chicago, Ill.
Purchases and Stores Division.—W. J. Farrell (Executive Vice-Chairman), Transportation Bldg., Washington 6, D. C. Annual meeting, June 22-23, 1944, Palmer House, Chicago, Ill.
Freight Claim Division.—Lewis Pilcher, 59 E. Van Buren St., Chicago 5, Ill.
Motor Transport Division.—George M. Campbell, Transportation Bldg., Washington 6, D. C.
Car Service Division.—E. W. Coughlin (Assistant to Chairman), Transportation Bldg., Washington 6, D. C.
Finance, Accounting, Taxation and Valuation Department.—E. H. Bunnell, Vice-President, Transportation Bldg., Washington 6, D. C.
Accounting Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C.
Treasury Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C.
Traffic Department.—A. F. Cleveland, Vice-President, Transportation Bldg., Washington 6, D. C.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—F. L. Johnson, Alton R. R., 340 W. Harrison St., Chicago, Ill.

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—P. R. Austin, Johns-Manville Sales Corp., Merchandise Mart, Chicago, Ill.

CANADIAN RAILWAY CLUB.—C. R. Crook, 4415 Marcil Ave., N. D. G., Montreal, Que. Regular meetings, second Monday of each month, except June, July and August, Windsor Hotel, Montreal, Que.

CAR DEPARTMENT ASSOCIATION OF ST. LOUIS, MO.—J. J. Sheehan, 1101 Missouri Pacific Bldg., St. Louis, Mo. Regular meetings, third Tuesday of each month, except June, July and August, Hotel De Soto, St. Louis, Mo.

CAR DEPARTMENT OFFICERS' ASSOCIATION.—F. H. Stremmel, 6536 Oxford Ave., Chicago 31, Ill. Annual meeting, September 26-28, 1944, Hotel Sherman, Chicago, Ill.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—Ralph I. Feddor, 2803 N. Campbell Ave., Chicago, Ill. Regular meetings, second Monday of each month, except June, July and August, La Salle Hotel, Chicago, Ill.

CENTRAL RAILWAY CLUB OF BUFFALO.—R. E. Mann, 1840-42 Hotel Statler, McKinley Square, Buffalo, N. Y. Regular meetings, second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y.

EASTERN ASSOCIATION OF CAR SERVICE OFFICERS.—H. J. Hawthorne, Union Railroad, East Pittsburgh, Pa.

EASTERN CAR FOREMAN'S ASSOCIATION.—W. P. Dizard, 30 Church St., New York 7, N. Y. Regular meetings, second Friday of January, February (Annual Dinner), March, April, May, October and November, 29 W. 39th St., New York, N. Y.

LOCOMOTIVE MAINTENANCE OFFICERS' ASSOCIATION.—C. M. Lipscomb, 1721 Parker Street, North Little Rock, Ark. Annual meeting, September 26-28, 1944, Hotel Sherman, Chicago, Ill.

MASTER BOILER MAKERS' ASSOCIATION.—A. F. Stiglmeier, 29 Parkwood St., Albany 3, N. Y. Annual meeting, September 26-28, 1944, Hotel Sherman, Chicago, Ill.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—Ben Smart, 7413 New Post Office Bldg., Washington, D. C.

NATIONAL ASSOCIATION OF SHIPPERS' ADVISORY BOARDS.—C. J. Goodyear, 725 Reading Terminal, Philadelphia 5, Pa.

NATIONAL INDUSTRIAL TRAFFIC LEAGUE.—Edward F. Lacey, Suite 450, Munsey Bldg., Washington 4, D. C. Annual meeting, November, 1944, Hotel Pennsylvania, New York, N. Y.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—C. H. White, Room 1826, 208 S. La Salle St., Chicago 4, Ill.

NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Hotel Vendome, Boston, Mass.

NEW YORK RAILROAD CLUB.—D. W. Pye, 30 Church St., New York 7, N. Y. Regular meetings, third Thursday of each month, except June, July, August, September and December, 29 W. 39th St., New York, N. Y.

NORTHWEST CARMEN'S ASSOCIATION. — E. N. Myers, Minnesota Transfer Ry., 1434 Iowa Ave., St. Paul, Minn. Regular meetings, first Monday of each month, except June, July and August, Midway Club, 1931 University Ave., St. Paul, Minn.

PACIFIC RAILWAY CLUB.—William S. Wollner, P. O. Box A, Sausalito, Cal. Regular meetings, second Thursday of each alternate month, at Palace Hotel, San Francisco, Cal., and Hotel Hayward, Los Angeles, Cal.

RAILWAY BUSINESS ASSOCIATION.—P. H. Middleton, First National Bank Bldg., Chicago 3, Ill.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 308 Keenan Bldg., Pittsburgh, Pa. Regular meetings, fourth Thursday of each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

RAILWAY ELECTRIC SUPPLY MANUFACTURERS' ASSOCIATION.—J. McC. Price, Allen-Bradley Company, 624 W. Adams St., Chicago 6, Ill.

RAILWAY FUEL AND TRAVELING ENGINEERS' ASSOCIATION.—T. Duff Smith, Room 811, Utilities Bldg., 327 S. La Salle St., Chicago, Ill. Annual meeting, September 26-28, 1944, Hotel Sherman, Chicago, Ill.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—J. D. Conway, 308 Keenan Bldg., Pittsburgh, Pa.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with Telegraph and Telephone Section of A. A. R.

RAILWAY TIE ASSOCIATION.—Roy M. Edmonds, 610 Shell Bldg., St. Louis 3, Mo.

ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—Miss Elinor Heffern, Room 839, 310 S. Michigan Ave., Chicago 4, Ill. Annual meeting, September 19-21, 1944, Hotel Stevens, Chicago, Ill.

SIGNAL APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with A. A. R. Signal Section.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, 4 Hunter St., S. E., Atlanta, Ga. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta, Ga.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—D. W. Brantley, C. of Ga., Savannah, Ga.

TORONTO RAILWAY CLUB.—D. M. George, P. O. Box 8, Terminal "A," Toronto 2, Ont. Regular meetings, fourth Monday of each month, except June, July and August, Royal York Hotel, Toronto, Ont.

TRACK SUPPLY ASSOCIATION.—Lewis Thomas, Q. and C. Company, 59 E. Van Buren St., Chicago 5, Ill.

UNITED ASSOCIATIONS OF RAILROAD VETERANS.—Roy E. Collins, 112 Hatfield Place, Port Richmond, Staten Island 2, N. Y.

WESTERN RAILWAY CLUB.—E. E. Thulin, Suite 339, Hotel Sherman, Chicago, Ill. Regular meetings, third Monday of each month, except January, June, July, August and September, Hotel Sherman, Chicago, Ill.

Holabird Army Shop Has Repaired 100 Engines

The Holabird Transportation Corps Railroad Repair Shops, Holabird Signal Depot, Baltimore, Md., on May 25, celebrated the shopping of the 100th locomotive to be repaired there since the establishment of the shops in November, 1937. The ceremony was sponsored by employees and included inspection of the shops, supper and entertainment.

Brigadier General R. H. Wylie, Deputy Chief of Transportation, U. S. Army, was the principal speaker. Guests included a number of Army and railway officials.

News Department continued on next left-hand page

Space-Time War!

Today's military experts speak of "space-time war" as something new— but the railroads have been fighting, and winning, their war against space and time ever since the days of the Stourbridge Lion.

In their latest and most successful campaign, a campaign which started in 1925 with Lima's introduction of Modern Super Power Steam Locomotives, the railroads have won a succession of outstanding victories over time and space, as evidenced by a series of new records in gross-ton-miles per train-hour.

And now, responding still further to the calls of war, the railroads are surging ahead to new levels of national service in their determination to carry more freight, more miles, in less time than ever before.

LIMA LOCOMOTIVE WORKS — LIMA LOCOMOTIVE WORKS INCORPORATED — INCORPORATED, LIMA, OHIO

Equipment and Supplies

FREIGHT CARS

The MISSOURI PACIFIC is inquiring for 25 hopper cars of 70 tons capacity.

SIGNALING

The BOSTON & MAINE is installing a code controlled electric interlocking with complete approach signaling at Manchester, N. H., having contracted with the Union Switch & Signal Co. to carry out the work. The project contemplates the retirement of two large existing mechanical interlockings about one-half mile apart, and includes the control of junction switches in the Portsmouth and Lawrence Branches, with the control of outlying switches at sidings about one and one-half miles from the interlocking tower. The materials to be used involve 110-volt d. c. type M-2 switch layouts, searchlight signals, relays, housings, transformers, rectifiers, etc., at the two main locations, and low voltage style M-22A dual control switch layouts at junction and outlying switches. A new brick tower is being erected to house the interlocking machine centrally between the two controlled groups of functions.

Construction

GRAND TRUNK WESTERN.—This road has completed plans for the extension of its freight house at Milwaukee, Wis., at a cost of $20,000.

TEXAS & PACIFIC.—This road has awarded a contract, amounting to $40,000, to Russell J. Brydon, Dallas, Tex., for the construction of a maintenance of way equipment shop at Marshall, Tex. The road has also awarded a contract, amounting to $40,000, to Robert E. McKee, Dallas, Tex., for the construction of a motor transport garage at Dallas.

NORTHERN PACIFIC.—A contract has been awarded the Atherton Construction Company, Seattle, Wash., for the construction of a new Diesel maintenance shop at Auburn, Wash. The main building will be 75 ft. by 230 ft. with a 50-ft. by 121-ft. addition for a machine shop and a lean-to addition 109 ft. by 15 ft. for wheel storage. The shop will be of concrete and brick construction with steel columns and roof trusses and glass block window areas. It will have one through track and two additional tracks for servicing Diesel locomotives, an 80-ton drop table 18 ft. long and a 25-ton overhead traveling crane over one track. All tracks will be constructed over pits and the floor level outside will be depressed; in addition, platforms will be constructed alongside at the level of the locomotive floor.

The total cost of this project, including shop machinery and equipment to be furnished by the railroad, will be about $400,000.

Supply Trade

Lane Witt, who has been in the advertising and sales promotion department of the Crane Company, Chicago, for the past seven years, has been appointed managing editor of **"Industrial Marketing."**

The **Ardco Manufacturing Company** of North Bergen, N. J., manufacturers of locomotive drifting valves and rail lubricators, has been awarded a fourth star to add to its Army-Navy "E" flag for meritorious production achievement.

E. H. Leisch, district sales manager of the Adams & Westlake Company, has been appointed Eastern sales manager of the **Chicago Railway Equipment Company.** Mr. Leisch was born on December 1, 1898, and in 1926 entered the employ of the Adams & Westlake Company. Between 1926 and 1936, he served as manager of the New York office and as district sales manager at New York. In the latter year he was

E. H. Leisch

transferred to Chicago, where he was located until his recent appointment.

Dr. Lawrence W. Bass, director of the New England Industrial Research Foundation, has been appointed associate director of research of the **Air Reduction Company** and the **United States Industrial Chemicals Company.**

The **Bendix-Westinghouse Automotive Air Brake Company** has announced the following new appointments: **I. F. Nelis,** manager, government sales; **E. W. McKay,** eastern regional sales manager; **A. E. Wolfe,** western regional sales manager; **D. R. Brehm,** southwestern regional sales manager; **J. F. Shumaker,** eastern regional engineer; **J. V. Ralston,** central regional engineer; **W. L. Bevan,** western field engineer; **J. Simmons,** southwestern service representative; and **G. E. Gribble,** central service representative.

Muscoe Burnett, Jr., sales manager of the **Oxweld Railroad Service Company,** Chicago, has been elected vice-president in charge of sales. Mr. Burnett was born at Paducah, Ky., and was educated at the University of Virginia. Since 1920 he has been associated with various units of the Union Carbide & Carbon Corporation, his first position being with the Oxweld Acetylene Company in New York. Four years later he was transferred to the Export department of the Union Carbide Company and

Muscoe Burnett, Jr.

still later he was appointed assistant division manager of the Linde Air Products Company at Chicago. In October, 1935, he was made assistant sales manager of the Oxweld Railroad Service Company and on February 1, 1937, was promoted to sales manager which position he has held until his recent election.

Jules A. Morland, former New York representative for the **Timken Roller Bearing Company,** has been appointed manager of a new subsidiary, the **Timken Roller Bearing Company of South America,** organized to service Timken bearings now operating in South America and to anticipate a postwar acceleration of industrial growth there.

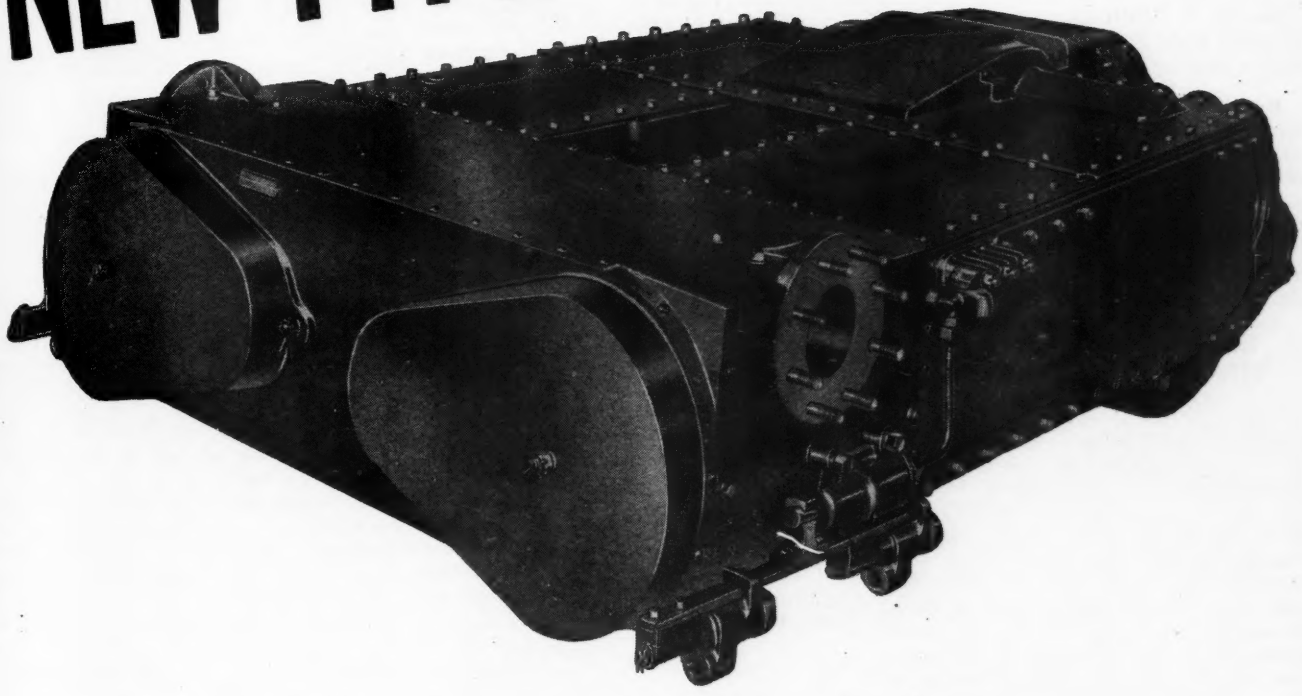
George J. Cossmann, formerly assistant central district manager, has been appointed central district manager of the **Graybar Electric Company** to succeed **Walter P. Hoagland,** vice-president, who retired June 1 after 44 years of service. **W. E. Guy** has been appointed district commercial manager at Chicago to succeed **J. H. Gleason,** who will remain in an advisory capacity pending his retirement.

The Westinghouse Electric International Company, which has operated in the international field as an exporter for more than 25 years, has entered the import field to use its world-wide organization as the basis for conducting a general import business. **Hampton C. Marsh,** who has been with the company's sales department for the past fifteen years, has been appointed manager.

M. D. Bensley has been appointed general manager of the **H. K. Porter Company's** three plants at Mt. Vernon, Ill., the Mount Vernon Car Manufacturing Company, the Wheel Foundry Division of Mt. Vernon Car, and the J. P. Devine Manufacturing Company. Mr. Bensley was graduated from Michigan University and began his business career with Farrar & Trefts, Inc., where he served as superintendent of the boiler and tank shop for a number of years. In 1917 he purchased and

News Department continued on next left-hand page

Check these advantages of the NEW TYPE "E" BOOSTER*



RECOGNIZING the trend in locomotive design, and noting the many new factors in current steam locomotive operation, the new Type "E" Booster has been developed expressly to meet today's conditions. Check the following advantages.

Short cut-off for economy in steam consumption. A special starting feature for full initial starting effort. Cast steel cylinders with large integral inlet and exhaust passages. Dynamic balancing for smooth operation at higher speeds. A roller bearing crankshaft for long life with minimum maintenance. A new air control permitting engagement at higher speed. A new design of ball joint with self-adjusting packing and large passage areas. The selection of the proper gear ratio for each given boiler pressure, wheel diameter, and adhesive weight.

*Trade Mark Reg. U. S. Pat. Off.

FRANKLIN RAILWAY SUPPLY COMPANY, INC.
NEW YORK • CHICAGO
In Canada: FRANKLIN RAILWAY SUPPLY COMPANY, LIMITED, MONTREAL

operated the Frontier Bronze Corporation of Niagara Falls, N. Y. He subsequently was employed for several years as a manufacturers' agent in North Carolina and in 1929 joined the Shenango Penn Mold Company, Pittsburgh, Pa., in a sales capacity, later becoming assistant to the president and continuing with the company for 15 years.

Robert J. Ritchey has been appointed manager of the market development division of the sales department, formerly known as the sales promotion bureau, of the **Carnegie-Illinois Steel Corporation.** Mr. Ritchey joined Carnegie-Illinois in 1937 as assistant in sales promotion. He was appointed assistant manager of sales promotion in 1941, and has been acting as manager of the present market development division since December, 1941.

OBITUARY

David T. Hallberg, assistant to the president of the P. & M. Company, Chicago, died in Highland Park, Ill., on May 27.

Richard B. Gordon, vice-president and director of the Penetryn System, Inc., died suddenly on May 8. Following his graduation from the University of Vermont in 1916 as a civil engineer, Mr. Gordon served with the Pennsylvania and the New York Central. In 1931 he went with the Penetryn System, Inc., to take charge of its railroad and industrial sales.

TRADE PUBLICATIONS

KINNEAR ROLLING DOORS.—A 40-page catalog has been published by the Kinnear Manufacturing Company, describing its complete line of rolling, folding, overhead and fire doors; rolling metal grilles and related accessories. This catalog has been completely reorganized for the convenience of the reader in finding information on specific types of doors and includes an index, arranged in sections on types of doors and applications. The construction and operation of the various types of doors and grilles is described in detail, with numerous illustrations, including photographs and drawings. The catalog also includes detailed specifications and is attractively printed in color.

NEW YORK CENTRAL II, replacement Marauder bomber purchased for the Army Air Forces by New York Central employees, had up to February 8, completed 22 successful missions, it is reported in the current issue of "Central Headlight," employee magazine. The bomber began her career November 26, 1943, and in the 2½ months following chalked up 83 combat hours. Nineteen of her 22 missions were attacks on enemy's railroad communications.

Furloughed N. Y. C. employee, S/Sgt. Anthony J. Gibbs, attached to the bomber crew, wrote of the conduct of the ship on her 13th mission, characterizing it as "no milk run." The enemy, he wrote "tried to duplicate what they did on the 24th of February last year," when New York Central I was shot down.

Financial

ATLANTIC COAST LINE.—*Acquisition.*—This company has applied to the Interstate Commerce Commission for authority to acquire a 1.8-mile line of the Jacksonville, Gainesville & Gulf, located within the corporate limits of Gainesville, Fla., in connection with the development of a new route through that city more favorable to operations than the line heretofore used, which is to be abandoned.

BALTIMORE & OHIO.—*Promissory Notes.*—This road has applied to the Interstate Commerce Commission for authority to issue $605,250 of promissory notes, series C, in further evidence of the unpaid balance of the purchase price of four 1,000-hp. Diesel-electric switching locomotives and six 660-hp. Diesel-electric switching locomotives ordered from the American Locomotive Co. at an aggregate cost, respectively, of $314,000 and $358,500. Subject to the commission's approval, the notes have been sold by competitive bidding to the Central National Bank of Cleveland, O., to bear a 1⅞ percent annual interest rate.

FRANKLIN & CAROLINA.—*Acquisition.*—This company has applied to the Interstate Commerce Commission for authority to acquire and operate a line, not now operated as a common carrier, from a point near Franklin, Va., to Franklin Junction, 19 miles. At the latter point it would connect with the Atlantic Coast Line. The applicant is controlled by Camp Manufacturing Co. and Chesapeake-Camp Corp., manufacturers of lumber and paper, and the transaction is to be financed through sale of stock.

CENTRAL OF NEW JERSEY.—*Equipment Trust.*—On May 26 the Jersey Central and its wholly-owned subsidiary, the Central of Pennsylvania, jointly asked for bids by June 5 for the purchase of an equipment trust issue to finance 75 to 80 per cent of the estimated cost of 1,600 new freight cars to be acquired primarily for use in handling traffic originating on lines in Pennsylvania. The issue is to be known as the Central of Pennsylvania equipment trust certificates of 1944.

Bids were invited on $3,970,000 of certificates maturing in ten equal annual installments beginning June 15, 1945; on $3,720,000 of certificates maturing in ten equal annual installments beginning June 15, 1945; and on $3,720,000 of certificates maturing in 15 equal annual installments beginning June 15, 1945. Notice of acceptance, subject to the approval of the Interstate Commerce Commission, will be given by June 6. Delivery of the cars is expected this summer. Included are 1,000 70-ton composite gondola cars being built by the Bethlehem Steel Company, 500 50-ton composite hopper cars being built by the Pressed Steel Car Company and 100 70-ton flat cars being built by the Greenville Steel Car Company.

CENTRAL OF NEW JERSEY.—*Annual Report.*—The 1943 annual statement of this road reveals the C. N. J. last year handled the greatest volume of freight in its history, and had unprecedented operating revenues "which were not reflected, however, in the company's net income after heavy increases in taxes, wages and other items which were independent of the increased volume of business." Railroad operating revenues totaled $62,974,869, compared with $57,446,744 in 1942, but net income declined to $712,860 compared with $5,046,664 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared with 1942
Average Mileage Operated	654.59	-3.25
RAILWAY OPERATING REVENUES	$62,974,869	+$5,528,126
Maintenance of way and structures	7,755,966	+1,975,422
Maintenance of equipment	10,754,850	+889,373
Transportation	25,406,506	+3,665,878
TOTAL OPERATING EXPENSES	46,161,089	+6,850,547
Operating ratio	73.3	+4.87
NET REVENUE FROM OPERATIONS	16,813,780	-1,322,421
Railway tax accruals	8,396,228	+2,954,671
Hire of equipment	2,925,833	-173,227
Joint facility rents	301,119	+27,387
NET RAILWAY OPERATING INCOME	5,190,600	-4,131,252
Non-operating income	839,926	-226,742
GROSS INCOME	6,030,526	-4,357,994
Rent for leased roads and equipment	2,380,025	+7,099
Interest on funded debt	2,430,743	+44,093
TOTAL DEDUCTIONS FROM GROSS INCOME	5,317,666	-24,190
NET INCOME	712,860	-4,333,805

CHICAGO & ILLINOIS MIDLAND.—*Stock.*—This road has applied to the Interstate Commerce Commission for authority to issue redeemable capital stock in the amount of $1,000,000, consisting of 10,000 shares of $100 par value each. The stock would be delivered to the road's parent company, the Commonwealth Edison Company, in return for a cash advance of $1,000,000, to be used, along with $200,000 from applicant's treasury, to redeem $1,200,000 of 2½ per cent serial notes held by five Chicago banks.

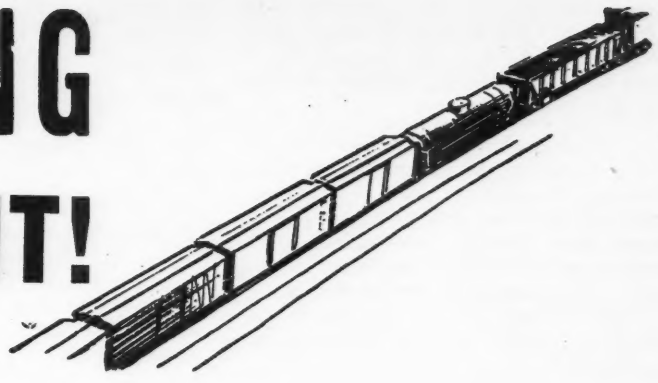
The stock would be identical with the 50,000 shares already outstanding, except that it would be redeemable at par at any time at the option of the applicant upon not less than 10 days written notice.

CHICAGO & NORTH WESTERN.—*Reorganization.*—The District Court at Chicago on May 29, entered an order providing for the return of the Chicago & North Western to the reorganized company on June 1 and directing the issuance of new securities under the plan of reorganization.

CHICAGO, ROCK ISLAND & PACIFIC.—*Promissory Notes.*—Division 4 of the Interstate Commerce Commission has authorized this road to issue $5,962,500 of promissory notes in further evidence of the unpaid purchase price of equipment to cost $7,950,000 which is being obtained under conditional sale agreements. The remaining 25 per cent is to be paid in cash. The notes have been sold by competitive bidding to the First National Bank of Chi-

News Department continued on next left-hand page

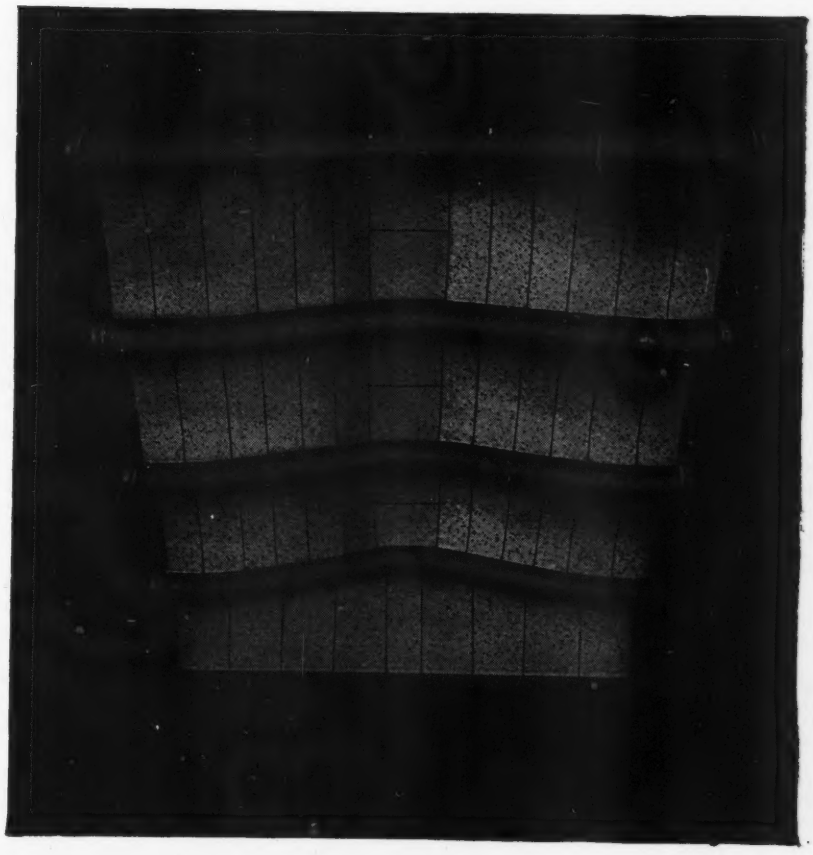
FUEL SAVING AN ARCH HABIT!



Over 33 years ago railroad men satisfied themselves as to the fuel saving of the locomotive Arch.

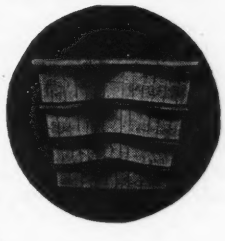
Since then the increase in locomotive power, higher rates of combustion and the widespread use of stokers has increased the fuel savings attributable to the Arch.

Today, when conservation of fuel is so vitally important to our war effort, don't handicap the effectiveness of the Arch by skimping on Arch brick. When your locomotives leave the roundhouse, be sure they are equipped with a *complete* Arch.



HARBISON-WALKER REFRACTORIES CO.

Refractory Specialists



AMERICAN ARCH CO.
INCORPORATED
60 EAST 42nd STREET, NEW YORK, N. Y.

Locomotive Combustion Specialists

cago at an interest rate of 1.69 per cent per annum. The equipment being bought includes 10 4-8-4 steam locomotives, 9 5,400-hp. Diesel-electric freight locomotives, and 500 50-ton box cars.

CHICAGO, SOUTH SHORE & SOUTH BEND. —*Par Value of Stock.*—Division 4 of the Interstate Commerce Commission has authorized this road to convert the 77,895 shares of its $50 par value common stock outstanding to 311,580 shares of $12.50 par value. The transaction is designed to facilitate the sale of the holdings of the Midland Utilities Co., now the principal stockholder.

COLORADO & SOUTHERN.—*Promissory Notes of Ft. W. & D. C.*—Division 4 of the Interstate Commerce Commission has authorized the Ft. Worth & Denver City, controlled by this company through stock ownership, to issue $1,444,500 of promissory notes in evidence of, but not in payment for, the unpaid portion of the purchase price of 500 50-ton box cars to be built at a total estimated cost of $1,500,000 by the Chicago, Burlington & Quincy. The issue has been sold through competitive bidding to the First National Bank of Chicago at a yearly interest rate of 2¼ per cent. The road's available cash is being used for the reduction of debt bearing a higher rate of interest, the division pointed out. The original application for authority to issue $1,700,000 of promissory notes in connection with this transaction was later amended to the amount approved by the division.

EMORY RIVER.—*Issue of Securities.*—Division 4 of the Interstate Commerce Commission has authorized this road to issue $350,000 of common stock of $100 par value and $100,000 of non-negotiable 4 per cent promissory notes, all of which have been sold at par to persons or firms interested in coal properties to be served by the line, which is to be rehabilitated and extended with the proceeds of these issues.

COLORADO & SOUTHERN.—*Annual Report.* —The 1943 annual statement of this road shows a net income, after interest and other charges, of $2,588,219, as compared with a net income of $1,592,849 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared With 1942
Average Mileage Operated	748.35	-5.66
RAILWAY OPERATING REVENUES	$14,192,749	+$3,445,972
Maintenance of way and structures	1,818,296	+653,224
Maintenance of equipment	2,194,409	+458,120
Transportation	4,222,073	+749,543
TOTAL OPERATING EXPENSES	9,023,802	+2,011,607
Operating ratio	63.58	-1.67
NET REVENUE FROM OPERATIONS	5,168,948	+1,434,366
Railway tax accruals	1,614,384	+903,335
RAILWAY OPERATING INCOME	3,554,564	+531,031
Hire of equipment—Net Dr.	150,130	+54,393
Joint facility rents—Net Dr.	221,782	+23,591
NET RAILWAY OPERATING INCOME	3,182,651	+453,046
Total other income	1,200,975	+278,442
TOTAL INCOME	4,383,626	+731,487
Interest on funded debt	861,047	-311,898
TOTAL FIXED CHARGES	904,343	-312,136
NET INCOME	2,588,219	+995,370

ILLINOIS CENTRAL. — *Modification of Leases.*—Division 4 of the Interstate Commerce Commission has approved a modification of the terms of the leases under which this road operates the Chicago, Memphis & Gulf and the Southern Illinois & Kentucky to give effect to the commission's current depreciation accounting requirements.

JOLIET UNION DEPOT.—*Operation.*—The Atchison, Topeka & Santa Fe, Alton, and Chicago, Rock Island & Pacific, each the owner of one third of the stock of the Joliet (Ill.) Union Depot Co., have applied to the Interstate Commerce Commission for approval of a modified agreement for the continued use of that company's passenger station and related facilities.

NEW YORK CENTRAL.—*New Director.*—Sidney C. Murray, general counsel, Chicago, has been elected a director to fill a vacancy on the board.

PENNSYLVANIA.—*Refinancing.*—Division 4 of the Interstate Commerce Commission has authorized the Pennsylvania Company, this road's wholly-owned subsidiary, to issue $35,000,000 of secured notes, to be sold at par in connection with its redemption of the $44,779,000 of its 28-year 4 per cent secured bonds in the hands of the public. The $1,221,000 of such bonds held in its treasury will be canceled. The issue will be retired by call on August 1 at 106 plus interest, and the additional cash requirements will be met from treasury funds and from the sale of $5,000,000 of Pennsylvania Railroad 15-year 3½ per cent convertible debenture bonds owned by the Pennsylvania Company.

The new notes include $15,000,000 of serial notes, series A, to mature in equal annual installments over a 10-year period, with interest rates varying from 1 per cent to 2.3 per cent, and $20,000,000 of 25-year 3⅛ per cent series B sinking fund secured notes. The series A notes have been sold to a group of banks and the series B notes to two insurance companies, all through private negotiation. The new issues are secured by pledge of $38,262,100 par value of Norfolk & Western common stock. In view of the nature of the collateral and the financial standing of the issuing company, and of the fact that the purchasers of the new issues "may hold" varying amounts of the issue to be redeemed at a premium, the division found that payment of "duplicate interest" on the new issues, for the two months between the date of their issue and August 1, at which time interest payments cease on the called bonds, should have been avoided, and therefore required that the new issues be sold at par plus interest accrued prior to August 1.

The division pointed out that the average annual cost of the new money will be about 1.965 per cent for the serial notes and 2.915 per cent for the entire new issue. The net interest saving is estimated as $8,237,530, an average of $433,554 a year, and in addition a $4,827,964 reduction in the Pennsylvania Railroad's 1944 federal taxes is expected to result from the absorption of expenses and premiums paid and to be paid. In view of these anticipated savings, and the accelerated rate of debt reduction the transaction will produce, the division held that the payment of a fee of $87,500 to Kuhn, Loeb & Co. for advice and services performed in connection with the refinancing was not excessive.

A P. R. R. stockholder, Emma M. Butler (whose counsel was Robert J. Bulkley, who has acted as counsel for Halsey Stuart & Co. and Otis & Co., banking firms who have appeared before the commission at various times in opposition to so-called "Wall Street" banking firms) challenged the propriety of the payment to Kuhn, Loeb & Co., asserting that, since no underwriting was involved, no public sale of securities was contemplated, and no risks were taken by that firm, the fee was excessive. The intervening stockholder contended further that the P. R. R. and its subsidiaries "are well qualified to handle large financial transactions through their own organization, without the high priced advice of investment bankers." Because of the provisions of the commission's report in its Ex Parte No. 158 proceeding, which required competitive bidding in the sale of most railroad securities (reported in *Railway Age* of May 13, Page 910), with respect to employing investment bankers as advisers in connection with new security issues, the further argument was advanced that approval of the Kuhn, Loeb & Co. fee in this case would have the effect of establishing a precedent.

The division pointed out that the railroad had indicated that the "primary business" of its officers is transportation, and that transactions of the nature under consideration are so infrequent that the cost of maintaining an organization qualified to perform the functions of an investment banker would not be justified. The company's views were further stated as to the familiarity of Kuhn, Loeb & Co. with its financial affairs and its contacts with possible purchasers of securities, and as to the costs of a public offering of the new issues. In view of the conclusions set forth in the Ex Parte No. 158 report, the division indicated that the only question for it to determine was whether the fee to be paid was excessive, and this, being the customary dealer's or broker's fee, it held not to be out of proportion to the services performed and the benefits derived.

SOUTHERN-WASHINGTON & OLD DOMINION.—*Transfer of Ownership.*—Examiner R. Romero has recommended in a proposed report that the Interstate Commerce Commission deny the application of the Washington & Old Dominion to purchase for $70,000 the branch of the Southern from Alexandria, Va., to Purcellville, 46.44 miles, now operated by it under lease. The examiner considered it improbable that operation of the line under normal conditions would produce sufficient revenues to

News Department continued on second right-hand page

ect expenses, including the payments on e obligations it would incur to finance the nsaction. The value of the line was fixed r rate-making purposes at $1,908,000,

TERMINAL RAILROAD ASSOCIATION OF . LOUIS.—*Acquisition.*—This company s applied to the Interstate Commerce ommission for approval of a plan whereby would exchange a new $7,860,000 issue 4 per cent 75-year refunding and im-rovement bonds for certain capital stocks the St. Louis Bridge Company and the unnel Railroad of St. Louis, thereby ac-iiring control of those properties now erated by Terminal under the terms of 500-year lease. The present annual cost f the leases under which rentals are guar-nteed dividends on lessors' stocks pro-osed to be acquired) is about $525,780, e application states, adding that the pro-osed transaction would result in annual avings of about $200,000 in expenses and axes as well as relieving Terminal of its bligation to repair and perhaps rebuild e Eads bridge "in the not remote future." The tax savings are expected to come s a result of relief from federal income axes following cancellation of the leases; or the rentals now paid to the lessors have een treated by the government as "con-tructive income" of those companies on hich income taxes must be paid. And ecause such tax payments have been made y Terminal, they, too, have been consid-red "constructive income" of the lessors, ubject to income tax which is also paid y Terminal.

The bonds would be exchanged on the asis of $150 for each share of first pre-erred stock of the Bridge Company and ach share of common stock of the Tunnel ompany; and on the basis of $75 for each hare of the Bridge company's second pre-erred. Terminal already owns all of he latter's 25,000 shares of common. The onds would be due July 1, 2019, redeem-ble at the option of Terminal on July 1, 952, or thereafter on the first day of ny month; and the indenture would pro-ide for sinking fund payments of $30,000 nnually, calculated to produce, if invested t 3 per cent, by the July 1, 2019, maturity ate, a sum equal to the $7,860,000 princi-al. The issue would be guaranteed as to in-erest and sinking fund payments by Ter-inal and its 15 proprietary railroads—one-ixteenth each; and collateralized by $12,-00,000 of Terminal's general mortgage 4 er cent bonds.

The plan also provides Terminal's pay-ng in cash from its treasury its first con-olidated 5 per cent mortgage bonds in he principal amount of $5,000,000. The essor's stocks to be acquired would be ledged under the general mortgage bonds, nd assigned to the refunding and improve-ent bonds (the exchange bonds) subject nly to the general mortgage lien. The pplication also seeks authority to issue $7,860,000 note to cover a bank loan, and o be in effect only a few days to facilitate he mechanics of the financing.

TEXAS PACIFIC-MISSOURI PACIFIC TER-INAL.—*Securities.*—This company and he Texas & Pacific and Missouri Pacific ave filed with the Interstate Commerce Commission a joint application seeking authority for the T. P.-M. P. T. to issue and sell, and for the two parent railroads to assume liability as guarantors of $6,040,000 of 30-year mortgage bonds, series A. The bonds would be sold under competitive bidding arrangements "at not less than par and with an interest rate not in excess of 3¾ per cent," and the proceeds used to call for redemption on September 1 a like amount of first mortgage 5½ per cent bonds.

WESTERN MARYLAND.—*Annual Report.*—The 1943 report of this road shows a net income, after interest and other charges, of $4,509,441, as compared with a net income of $4,162,230 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared With 1942
Average Mileage Operated	841.79	−14.58
RAILWAY OPERATING REVENUES	$34,706,316	+$4,066,665
Maintenance of way and structures	4,563,122	+1,270,584
Maintenance of equipment	7,023,111	+534,277
Transportation	8,898,652	+878,791
TOTAL OPERATING EXPENSES	21,956,061	+2,799,451
Operating ratio	63.26	+.74
NET REVENUE FROM OPERATIONS	12,750,254	+1,267,214
Railway tax accruals	5,523,118	+1,122,319
RAILWAY OPERATING INCOME	7,227,137	+144,895
Equipment rents—Net Cr.	417,280	+14,300
NET RAILWAY OPERATING INCOME	7,464,076	+152,228
Total other income	333,084	+132,269
GROSS INCOME	7,797,160	+284,497
Rent for leased roads	530,126	.....
Interest on funded debt	2,541,112	−52,778
TOTAL DEDUCTIONS FROM GROSS INCOME	3,287,720	−62,714
NET INCOME	4,509,441	+347,211
Disposition of net income:		
Dividend on First Preferred Stock	1,241,947	.....
Balance to Profit and Loss	$3,267,494	+$347,211

Average Prices Stocks and Bonds

	May 31	Last week	Last year
Average price of 20 representative railway stocks..	41.00	40.43	38.41
Average price of 20 representative railway bonds..	89.33	88.53	79.00

Dividends Declared

Atchison, Topeka & Santa Fe.—5% preferred, $2.50, semi-annually, payable August 1 to holders of record June 30.

Bangor & Aroostook.—5% preferred accum., $2.50, payable July 1 to holders of record June 6.

Boston & Albany.—$2.50, payable June 30 to holders of record May 31.

East Mahoney.—$1.25, semi-annually, payable June 15 to holders of record June 5.

Erie.—Common and Certificates of beneficial interest, both 50¢, both payable June 15 to holders of record May 31.

Minneapolis & St. Louis.—Special, $2.00, payable July 1 to holders of record June 15.

Mobile & Birmingham.—4% preferred, $2.00, semi-annually, payable July 1 to holders of record June 1.

Pennsylvania.—Irregular, $1.00, payable June 28 to holders of record June 3.

Union Pacific.—$1.50, quarterly, payable July 1 to holders of record June 5.

Ware River.—Guaranteed, $3.50, semi-annually, payable July 5 to holders of record June 30.

Railway Officers

EXECUTIVE

James A. Jones, general superintendent of the telegraph and telephone department of the Southern at Washington, D. C., has been appointed assistant to vice-president in charge of communications, effective June 1.

W. H. Wenneman, assistant to the president of the New York, Chicago & St. Louis and the Pere Marquette, has been elected vice-president of these companies with headquarters at Cleveland, Ohio.

George C. Frank, chief clerk to the president of the Erie, has been appointed to the position of assistant to the president, succeeding **C. E. Coe,** who has resigned from that post. In his new capacity Mr. Frank will have direct supervision over the railroad's public relations program, in addition to other duties. He was born at New York in 1906, and entered the service of the Erie in 1923 as a stenographer and clerk. He occupied positions in various de-

George C. Frank

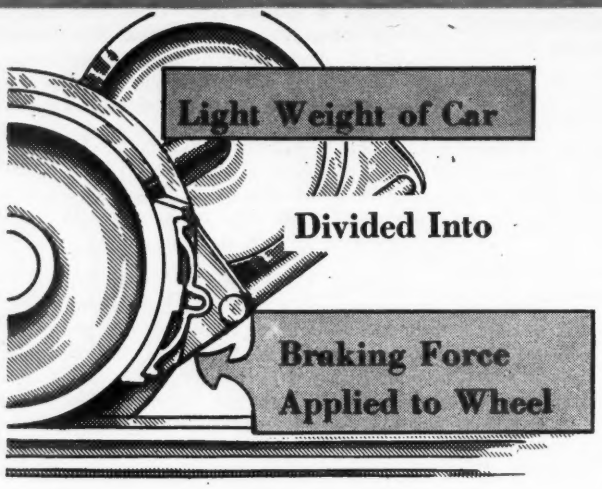
partments of the railroad until 1933, when he was appointed secretary to the vice-president in charge of operations. Three years later he was named secretary to the president, and served also as secretary to the trustees. In 1941 he became secretary to Robert E. Woodruff, when the latter was appointed president of the Erie, and early this year Mr. Frank was named chief clerk to the president. This post he held until his present appointment as assistant to the president.

P. H. Van Hoven, first vice-president of the Duluth, Missabe & Iron Range, has been elected president to succeed **C. E. Carlson,** who retired on May 31, after 44 years of continuous service, and has been succeeded by **F. J. Voss,** assistant to vice-president.

George H. Minchin, vice-president in charge of operations of the Atchison, Topeka & Santa Fe, who has been on leave of absence since February because of illness, has returned to service with head-

News Department continued on second left-hand page

SPEED GOVERNOR CONTROL
of Braking Ratios



Braking Ratio

The relation between the braking force applied to the wheel and the car weight expressed in percentage. Thus—

150% BRAKING RATIO—1½ TIMES THE CAR WEIGHT

250% BRAKING RATIO—2½ TIMES THE CAR WEIGHT

150% BRAKING RATIO

Used in Regular Passenger Service

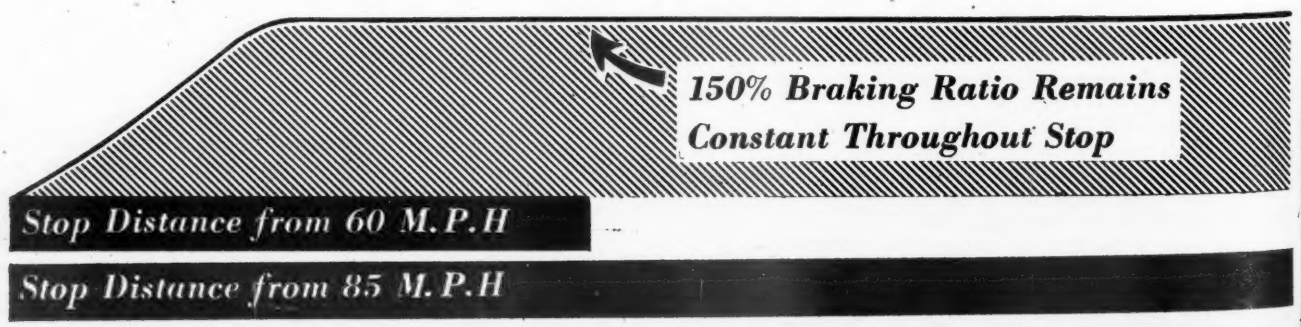
For brake equipments where the braking ratio cannot be regulated, experience has shown that 150% is the maximum that can be employed. This became established when 60 M.P.H. was the maximum train speed.

HIGHER BRAKING RATIOS

Required for Stops from Higher Speeds

The chart below shows the stop distance relation if the customary 150% braking ratio were used for stops from higher speeds. With an increase in speed of 25 M.P.H. the stop distance is about doubled. This is because of the tremendous increase in energy developed within the train at the higher speed. Therefore, to shorten the stop distance, it is necessary to use higher brake shoe forces. On modern high speed trains braking ratios up to 250% are solving the problem.

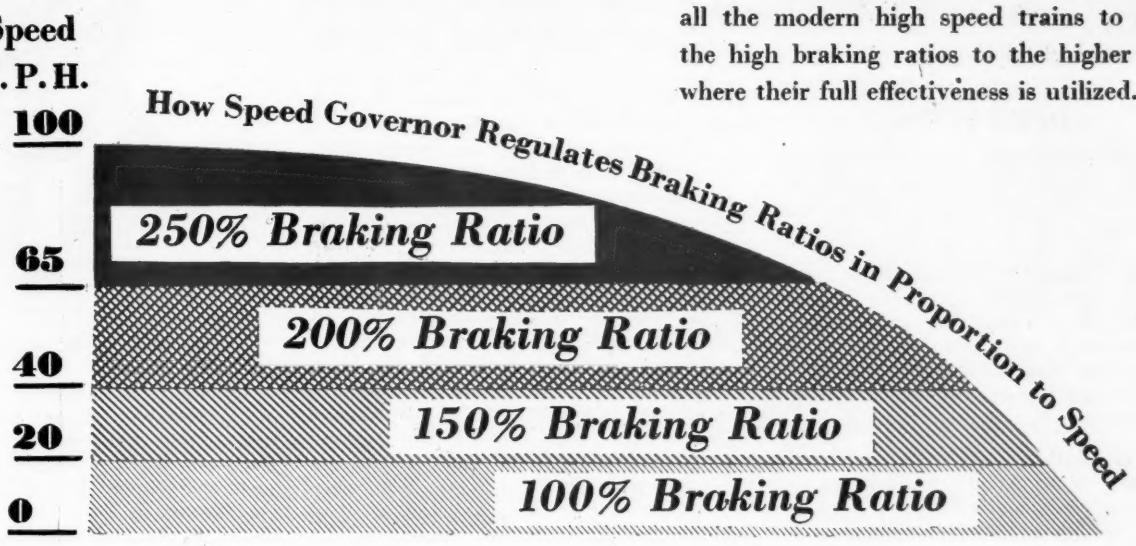
But the increased braking ratios assuredly would cause wheel sliding at the lower speeds if the higher ratios were maintained throughout the stop or used at the lower speeds, as followed in regular service with a constant 150% braking ratio.



WESTINGHOUSE AIR BRAKE

for Shorter, Smoother Stops from HIGH SPEEDS

SPEED GOVERNOR CONTROL, therefore, was developed and is used on practically all the modern high speed trains to confine the high braking ratios to the higher speeds where their full effectiveness is utilized.



High Braking Ratios Used Only at High Speeds

Above 65 M.P.H. the Braking Ratio is 250%.

From 65 M.P.H. this Braking Ratio is gradually reduced to 200%.

From 40 M.P.H. the 200% Braking Ratio is gradually reduced to 150%.

From 20 M.P.H. the 150% Braking Ratio is gradually reduced to 100%.

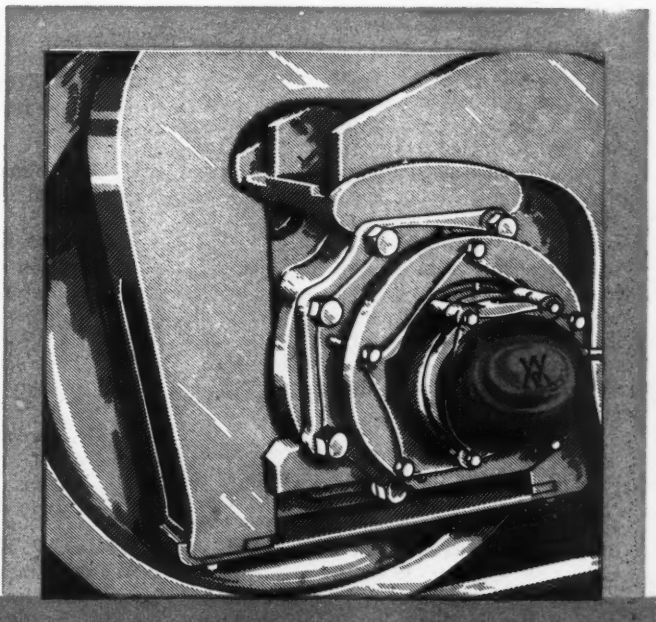
One Speed Governor per car is recommended in order to provide maximum flexibility with respect to train consist.

Decelostat Control

Wheel slip protection can be associated with speed governor control.

Smooth Stops From Any Speed

The gradual reduction in braking forces, proportional to speed change, maintains a uniform rate of retardation, eliminating surge generally associated with the stop.



COMPANY · Wilmerding, Penna.

quarters at Chicago. **H. B. Lautz,** who was appointed acting vice-president in charge of operations during Mr. Minchin's absence, has returned to his former position of General manager of the Eastern Lines, with headquarters at Topeka, Kans.

FINANCIAL, LEGAL AND ACCOUNTING

J. T. Suggs has been appointed general counsel of the Texas and Pacific, with headquarters at Dallas, Tex., succeeding **S. W. Lancaster,** who has retired as vice-president and general counsel.

OPERATING

L. J. Prendergast has been appointed superintendent communications, of the Baltimore & Ohio, with headquarters at Baltimore, Md.

S. R. Young, chief engineer of the Atlanta & West Point and the Georgia, has been appointed assistant general manager of the two roads and of the Western of Alabama, with headquarters at Atlanta, Ga. Mr. Young's former position has been discontinued.

A. E. Mathis, superintendent of transportation of the Atlanta & Sanit Andrews Bay, with headquarters at Dothan, Ala., has been appointed superintendent of car service, with the same headquarters. The position of superintendent of transportation has been abolished.

Earl T. Moore, assistant general manager of the Central of New Jersey, has been appointed to the position of general manager of that road. He succeeds **M. L. McElheny,** who will became assistant to the chief traffic officer, effective July 1, as the result of his request for less arduous duties. **James J. Duffy,** day general yardmaster at the Jersey City, N. J., freight yard, has been named to the new position of personnel assistant to the general manager. A photograph of Mr. Moore and a biographical sketch of his career appeared in the *Railway Age* of October 16, 1943, page 625.

M. P. Ayers, assistant superintendent of the Hastings and Dakota division of the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Montevideo, Minn., has been promoted to superintendent of the Trans-Missouri division, with headquarters at Miles City, Mont., succeeding **A. W. Hervin,** who has resigned. **J. M. Wolf,** trainmaster of the Terre Haute division, with headquarters at Chicago Heights, Ill., has been advanced to assistant superintendent at Montevideo, replacing Mr. Ayers, and **J. A. Jakubec,** a member of the general manager's staff at Chicago, has been promoted to trainmaster, with headquarters at Chicago Heights, relieving Mr. Wolf.

George A. Bays, whose promotion to superintendent of the Tucson division of the Southern Pacific, with headquarters at Tucson, Ariz., was reported in the *Railway Age* of May 20, was born at Grass Valley, Calif., on October 18, 1891, and entered railway service on May 7, 1910, as a brakeman of the Southern Pacific at Stockton, Calif. In 1913 he was promoted to conductor, with the same headquarters, and on July 1, 1921, he was advanced to assistant trainmaster of the Stockton division. On August 13, 1928, Mr. Bays was further advanced to trainmaster of the Tucson division, with headquarters at Tucson, and on September 16, 1937, he was transferred to the Coast division. On February 1, 1938, he was promoted to assistant superintendent of the Tucson division, holding that position until his new appointment.

John C. Goodfellow, whose retirement as superintendent of the Western division of the Southern Pacific, with headquarters at Oakland Pier, Cal., was reported in the *Railway Age* of May 20, was born at East Saginaw, Mich., on October 31, 1878, and entered railway service as a yard clerk of the Southern Pacific at Tucson, Ariz., on January 1, 1898. He subsequently served as a switchman and yard foreman, with the same headquarters, and in 1902 he went with the Michigan Central as a yardman at Bay City, Mich. He returned to the Southern Pacific on September 11, 1908, as a yardman and in October, 1916, he was advanced to assistant general yardmaster, with headquarters at Tracy, Cal. On August 10, 1917, Mr. Goodfellow was promoted to trainmaster of the Los Angeles division, with headquarters at Los Angeles, Cal., later serving in that capacity at Yuma, Ariz., until April 1, 1923, when he was further advanced to acting assistant superintendent of the San Joaquin division with headquarters at Fresno, Cal. On February 1, 1924, he was promoted to assistant superintendent of that division, with headquarters at Bakersfield, Cal., and later in the same year he was transferred to Tucson. On September 2, 1933, he was advanced to superintendent of the Salt Lake division, with headquarters at Ogden, Utah, and on August 1, 1940, he was transferred to the Western division, remaining in that location until his retirement.

TRAFFIC

W. B. Hahn, commercial agent of the Gulf, Mobile & Ohio at Montgomery, Ala., has been promoted to division freight traffic manager, with headquarters at Jackson, Tenn., succeeding to part of the duties of **Robert E. Stevenson,** who continues as executive assistant, with the same headquarters.

H. M. Johnson, general freight traffic manager of the Missouri Pacific, with headquarters at St. Louis, Mo., has been promoted to chief traffic officer to succeed **J. A. Brown,** retired, and has been succeeded by **Eugene Mock,** executive assistant to the chief traffic officer, who in turn has been succeeded by **C. D. Bordelon,** freight traffic manager. **T. B. Duggan,** assistant freight traffic manager, has been promoted to freight traffic manager to replace Mr. Bordelon; **H. R. Wilson,** general freight agent succeeds Mr. Duggan; and **C. L. Butler,** traffic assistant in the research department, replaces Mr. Wilson.

Walter W. Kremer, whose appointment as Western traffic manager of the Boston & Maine, with headquarters at Chicago, was reported in the *Railway Age* of May 27, was born at Kalamazoo, Mich., on May 10, 1900, and entered railway service on October 1, 1917, with the Pennsylvania at Kalamazoo. On October 1, 1924, he went with the Minneapolis & St. Louis as traveling freight agent at Detroit and on January 1, 1929, he went with the Canadian Pacific

Walter W. Kremer

traveling freight agent at Grand Rapids, Mich. Mr. Kremer was promoted to district freight representative at Detroit on December 1, 1934, and to district freight agent at St. Louis, Mo., on January 1, 1938. On January 1, 1941, he was further promoted to general freight agent for the Canadian Pacific, with headquarters at Detroit, Mich., and in May of the same year he was transferred to Boston, Mass., remaining in that location until his new appointment with the Boston & Maine became effective.

ENGINEERING & SIGNALING

W. R. Peck has been appointed engineer maintenance of way of the Atlanta & West Point, the Western of Alabama, and the Georgia. The position of chief engineer has been abolished.

A. C. E. Mullen, district engineer of the New York, New Haven & Hartford, with headquarters at New York, has retired at his own request because of ill health, after nearly 39 years of service. **M. J. McGovern** has been appointed acting district engineer.

Crosby Miller, whose appointment to the position of chief engineer of the Chesapeake & Ohio with headquarters at Richmond, Va., was announced in the *Railway Age* of May 20, was born at San Francisco, Calif., on September 1, 1881. He attended the University of California, being graduated in 1904, and then was employed successively by the Phoenix Bridge Company of Phoenixville, Pa.; the New York Central, at New York; C. W. Hudson, consulting engineer, also of New York; and the Pennsylvania Steel Company at Steelton, Pa. On June 8, 1914, Mr. Miller became bridge engineer of the Chesapeake & Ohio, being promoted to assistant chief engineer on March 15, 1943. He continued in this position until his recent appointment as chief engineer. **Carroll Benjamin Porter,** who succeeds Mr. Miller as assistant chief engineer, was born at Norfolk, Va., on Fe

ary 11, 1904. He attended the University Cincinnati, and entered the service of the esapeake & Ohio on November 18, 1922, rodman in the engineering department at lifton Forge, Va. He was named instruentman in November, 1923, draftsman in pril, 1925, and resident engineer in larch, 1929, being resident engineer on the onstruction of the new Big Bend tunnel nd the reconstruction of the old Big Bend unnel. On September 1, 1940, Mr. Porter as named assistant division engineer at untington, W. Va., and was promoted to e post of division engineer on May 1, 942. He served in this capacity until his cent appointment as assistant chief enineer.

Homer W. Dunn has resigned as assistnt signal engineer of the Coast Lines of e Atchison, Topeka & Santa Fe, with eadquarters at Los Angeles, Calif., to beme signal engineer of the Western Pafic, with headquarters at San Francisco, alif., succeeding **John R. Coles,** who has tired after 51 years' service.

Mr. Dunn was born in Delta, Iowa, on nuary 29, 1892. During summer months his college years he was employed by the

Homer W. Dunn

Union Switch & Signal Co. on signal conruction work on the Chicago, Milwaukee, St. Paul & Pacific. After graduating from e University of Arkansas in 1914, he was ccepted for an apprenticeship course in the ngineering department of the U. S. & S. Co. at Swissvale, Pa., serving part of his ime in signal construction on the Western Maryland. In 1916, Mr. Dunn became a raftsman in the signal engineer's office of he Coast Lines of the Santa Fe at Los Angeles, Calif. In April, 1923, he was prooted to chief draftsman, and in September, 939, he was advanced to the position he eld at the time of his new appointment.

Mr. Coles was born at Lincoln County, ngland, on October 26, 1873, and entered ailway service in 1891, with the Midland ailway, of England, as an apprentice sigalman, and three years later he was adanced to signalman. In 1907 he went with he Standard Electrical Construction Comany, San Francisco, and on June 1, 1908, e went with the Western Pacific, where e held various positions until 1917 when he as promoted to the position he held at the ime of his retirement.

PURCHASES AND STORES

Roswell Clifford Harris, general storekeeper of the Pennsylvania, has retired after 47 years of service, and **W. L. Oswalt** has been appointed to replace him in that position. **W. W. Shugarts,** now assistant to general storekeeper, will succeed Mr. Oswalt as assistant stores manager. Mr. Harris was born at Richmond, Ind., on May 8, 1874, and attended Purdue University. He entered railroad service in 1897 as a rodman of the Pennsylvania Lines West of Pittsburgh, at Richmond. In that year he became an assistant on the engineering corps of the Columbus division, being named assistant engineer of the Cleveland division in 1903. Mr. Harris was appointed division engineer of the Toledo division in 1906, was transferred to the Akron division in 1908, and was named supervisor engineer of the Lines West of Pittsburgh in 1913. In 1918 he was appointed general storekeeper, western lines, at Pittsburgh, Pa., and was promoted to general storekeeper at Philadelphia, Pa., in 1924. This position he held until his recent retirement.

MECHANICAL

T. L. Nichols, superintendent of motive power of the Atlanta & Saint Andrews Bay, with headquarters at Panama City, Fla., has been promoted to general superintendent in charge of the transportation and the mechanical departments, with headquarters at Dothan, Ala. The position of superintendent of motive power has been abolished.

George C. Vogel, general foreman of the Elizabethport, N. J., shops of the Central of New Jersey, has been appointed to the new position of superintendent of the car department. The title of **Frederick J. Gibson,** general car foreman, has been changed to general car inspector, to properly reflect his duties.

G. W. Fuller has been appointed shop superintendent of the Pere Marquette at Grand Rapids, Mich., succeeding **G. L. Lindquist,** who has been promoted to master mechanic of the Chicago, Petoskey & Detroit, and Grand Rapids divisions with headquarters at Grand Rapids. Mr. Lindquist replaces **J. B. Halliday,** retired. **Glenn Lee** has been named chief mechanical inspector at Grand Rapids, succeeding **T. Larrabee,** who has retired.

SPECIAL

Arthur W. Motley, who resigned recently as director of the Bureau of Placement of the War Manpower Commission, with headquarters at Washington, D. C., has been appointed director of employment of the Atchison, Topeka & Santa Fe, with headquarters at Chicago, a newly-created position.

Frank J. Goebel, whose appointment as director of personnel of the Baltimore & Ohio with headquarters at Baltimore, Md., was announced in the *Railway Age* of May 20, was born at Princeton, Ind., on September 26, 1893, and was graduated in 1919 from Benjamin Harrison Law School (Indiana Law School) with an LL.B. degree. Mr. Goebel entered railroading in December, 1915, with the Cincinnati, Indianapolis & Western, becoming secretary to president in January, 1916, and acting company secretary and tax and claims commissioner in July, 1917. In November of that year he was appointed secretary and tax and claims

Frank J. Goebel

commissioner, being named secretary and treasurer in September, 1918, and secretary and assistant counsel in March, 1920. He was advanced to the position of secretary and general attorney in May of the same year, and again to secretary, general attorney and assistant to vice-president in November. In June, 1927, Mr. Goebel joined the Baltimore & Ohio as assistant general solicitor at Cincinnati, Ohio, continuing in that capacity until his present appointment as director of personnel at Baltimore.

OBITUARY

William S. Sherman, general agent of the New York & Long Branch at Red Bank, N. J., died on May 21. He was 60 years old.

Charles L. Simpson, general superintendent of the Minneapolis, St. Paul & Sault Ste. Marie, with headquarters at Minneapolis, Minn., died in a hospital at Minneapolis on May 24. Mr. Simpson was born at Neenah, Wis., on April 3, 1881, and attended business college at Oshkosh, Wis. He entered railway service on June 12, 1899, as a station helper of the Wisconsin Central (now part of the Soo Line) at New Richmond, Wis., and later served as a telegraph operator and train dispatcher. In June, 1910, he was appointed chief clerk to the superintendent of transportation of the Soo Line, and on April 10, 1911, he was promoted to chief train dispatcher at Fond du Lac, Wis. On November 7, 1913, he was advanced to trainmaster on the Chicago division and ten years later he was promoted to assistant superintendent of the Chicago terminals. Mr. Simpson was tranferred to the Minnesota division, with headquarters at Harvey, N. D., on May 1, 1926, and on January 1, 1927, he was promoted to superintendent of the Missouri River division, with headquarters at Bismarck, N. D. He was later transferred to Superior, Wis., and then to Stevens Point, Wis., being located at the latter point until August, 1941, when he was promoted to the position he held at the time of his death.

Table of Freight Operating Statistics appears on second left-hand page

Require Less Time to Machine

THE savings effected by the use of HUNT-SPILLER *Air Furnace* GUN IRON start the moment that any part made from this wear-resisting material is chucked on a machine tool.

Operators do not have to feel their way through any casting made of HUNT-SPILLER *Air Furnace* GUN IRON. The smooth, even grained surface can be safely machined at maximum speeds without any danger to the cutting tools.

Less removal of stock is necessary because the uniformity of HUNT-SPILLER *Air Furnace* GUN IRON permits manufacture very close to finished sizes.

H S G I
Reg. U.S. Trade Mark
Cylinder Bushings
Cylinder Packing Rings
Pistons or Piston Bull Rings
Valve Bushings
Valve Packing Rings
Valve Bull Rings
Crosshead Shoes
Hub Liners
Shoes and Wedges
Floating Rod Bushings
Finished Parts
Dunbar Sectional Type Packing
Duplex Sectional Type Packing
for Cylinders and Valves
(Duplex Springs for Above
Sectional Packing)
Cylinder Snap Rings
Valve Rings, All Shapes
Light Weight Valves
Cylinder Liners and Pistons
for Diesel Service

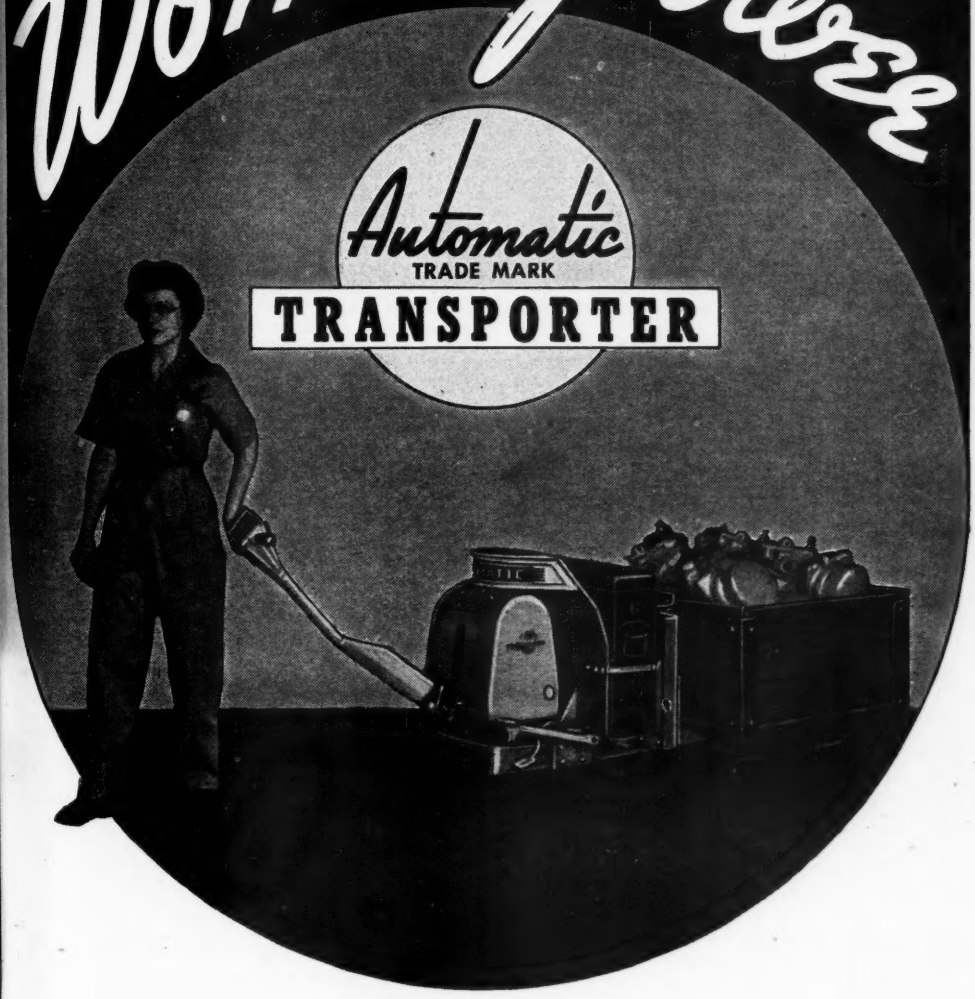
HUNT-SPILLER MFG. CORPORATION
V. W. Ellet, *President* **E. J. Fuller, *Vice-Pres. & Gen. Mgr.***

Office & Works
383 Dorchester Ave. **South Boston 27, Mass.**

Canadian Representative: Joseph Robb & Co., Ltd., 5575 Cote St. Paul Rd., Montreal, P. Q.
Export Agent for Latin America:
International Rwy. Supply Co., 30 Church Street, New York, N. Y.

HUNT-SPILLER GUN IRON
Air Furnace

CONVERT YOUR MANPOWER TO *Womanpower!*



NO STRAINING TUGGING PULLING *Nor* PUSHING

- **Positive mechanical brake**
- **Controls in steering handle**
- **Forward and reverse speeds**
- **Front wheel power drive**
- **Shockless hydraulic lift with Easy foot control**

★ The loss of manpower to the fighting forces — men who did the heavy handling — can be compensated for immediately with a TRANSPORTER and a woman operator. In fact your handling can be greatly improved this way as concerns greater speed, many more tons transported per day, and lower costs.

It doesn't take experienced help to operate a TRANSPORTER and still your handling is raised to its highest point of efficiency. No tie-ups—no stops—no clogging of floor space —no back breaking effort.

The battery powered TRANSPORTER is ready to operate at the trucker's command—forward or reverse—with complete brake and speed control. Just a movement of the handle —a push of the button (at operator's finger tip)—and away goes the load at safe walking speed.

MANUFACTURERS FOR OVER THIRTY FIVE YEARS *Electric Propelled* INDUSTRIAL TRUCKS

AUTOMATIC TRANSPORTATION CO.

51 WEST 87th STREET DIV. OF THE YALE & TOWNE MFG. CO. **CHICAGO 20, ILLINOIS**

Freight Operating Statistics of Large Steam Railways—Selected Items

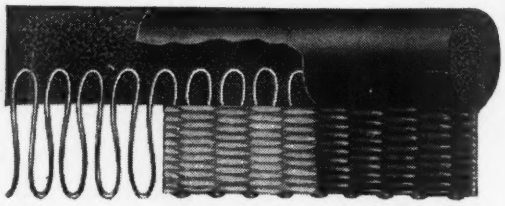
Region, road, and year	Miles of road operated	Train-miles	Locomotive-miles: Principal and helper	Locomotive-miles: Light	Car-miles: Loaded (*thousands*)	Car-miles: Per cent loaded	Ton-miles (*thousands*): Gross excl. locos. & tenders	Ton-miles (*thousands*): Net rev. and non-rev.	Road locos. on line: Serviceable: Unstored	Road locos. on line: Serviceable: Stored	Road locos. on line: B. O.	Road locos. on line: Per cent B. O.
New England Region:												
Boston & Albany	1944	362	171,142	208,168	39,723	4,285	60.7	291,044	121,482	81	..	13	13.8
	1943	362	188,007	237,606	55,149	4,865	60.8	344,127	151,829	79	..	15	16.0
Boston & Maine	1944	1,807	434,847	511,604	55,261	15,553	64.4	1,044,786	456,774	159	..	18	10.2
	1943	1,812	463,247	560,074	61,525	15,138	63.0	1,055,731	470,189	163	..	19	10.4
N. Y., New H. & Hartf.†	1944	1,815	570,847	713,562	65,226	20,860	66.5	1,320,939	583,423	248	1	26	15.5
	1943	1,816	570,287	723,197	61,245	20,545	65.2	1,338,583	588,555	237	7	32	17.4
Great Lakes Region:												
Delaware & Hudson	1944	846	377,443	477,118	44,625	15,867	65.0	1,170,420	617,851	146	20	48	22.4
	1943	848	376,725	469,130	48,132	14,272	63.4	1,066,177	561,066	157	26	38	17.2
Del., Lack. & Western	1944	971	401,197	472,783	79,776	17,424	69.9	1,137,424	541,692	150	14	31	15.9
	1943	982	392,266	479,044	86,662	16,922	67.8	1,146,558	554,032	162	5	26	13.5
Erie	1944	2,244	1,120,366	1,200,230	85,691	49,780	64.8	3,337,444	1,468,536	327	..	70	17.6
	1943	2,242	1,153,955	1,261,493	93,193	51,018	65.0	3,454,288	1,580,705	324	2	78	19.3
Grand Trunk Western	1944	1,026	286,200	293,946	3,105	9,606	63.0	643,973	278,123	62	..	14	18.4
	1943	1,026	291,156	300,527	3,209	8,288	63.9	560,295	249,060	70	1	14	16.5
Lehigh Valley	1944	1,247	597,621	657,313	102,980	24,542	60.3	1,761,055	820,244	154	..	13	7.8
	1943	1,248	477,060	524,140	72,174	19,813	62.8	1,415,661	684,404	142	..	15	9.6
New York Central	1944	10,325	3,974,309	4,284,684	273,988	149,232	61.6	10,560,310	4,852,741	1,199	8	213	15.0
	1943	10,365	3,979,028	4,310,351	266,932	144,962	60.0	10,659,995	4,979,876	1,196	2	212	15.0
New York, Chi. & St. L.	1944	1,657	893,627	904,295	11,350	34,875	65.5	2,306,847	1,047,542	170	..	17	9.1
	1943	1,657	918,439	936,817	13,055	33,625	65.6	2,299,827	1,078,613	165	..	16	8.8
Pere Marquette	1944	1,945	481,147	499,685	14,213	15,569	65.0	1,064,898	503,511	144	..	20	12.2
	1943	1,998	499,349	515,608	15,414	14,805	63.5	1,042,747	494,124	141	..	23	14.0
Pitts. & Lake Erie	1944	229	103,995	109,301	80	4,328	60.6	385,126	223,224	35	..	11	23.9
	1943	233	100,492	106,324	102	4,362	60.9	390,284	227,834	39	1	8	16.7
Wabash	1944	2,381	765,600	787,778	18,807	28,338	71.9	1,812,898	845,270	172	7	41	18.6
	1943	2,381	800,890	831,858	18,961	28,282	68.3	1,886,478	884,222	182	6	35	15.7
Central Eastern Region:												
Baltimore & Ohio	1944	6,109	2,535,730	3,097,581	321,690	84,263	62.9	6,062,614	2,947,526	928	..	197	17.5
	1943	6,116	2,561,422	3,171,203	352,154	84,065	62.7	6,083,600	2,988,409	934	..	197	17.4
Central of New Jersey†	1944	655	264,151	311,000	72,329	9,572	59.3	708,844	347,461	140	2	14	9.0
	1943	657	278,660	323,366	64,164	8,977	63.4	674,393	350,435	131	2	21	13.6
Chicago & Eastern Ill.	1944	912	327,208	337,303	10,991	9,741	59.1	699,390	314,654	80	..	7	8.0
	1943	912	283,191	290,576	7,356	7,950	57.2	585,646	259,224	71	..	8	10.1
Elgin, Joliet & Eastern	1944	392	145,969	151,461	4,014	3,974	65.0	314,782	170,763	64	..	12	15.8
	1943	392	153,483	156,304	2,664	3,952	62.7	318,117	170,794	71	..	5	6.6
Long Island	1944	372	40,353	42,275	17,470	464	56.0	35,547	15,168	45	..	8	15.1
	1943	374	38,238	40,017	20,853	409	54.0	31,963	13,614	43	..	5	10.4
Pennsylvania System	1944	9,881	5,147,672	5,956,712	737,748	188,661	60.6	13,682,806	6,478,337	2,019	..	189	8.6
	1943	9,940	4,878,593	5,739,172	781,802	179,196	61.0	13,030,227	6,251,372	1,940	..	176	8.3
Reading	1944	1,411	622,203	706,816	89,160	20,120	62.8	1,571,261	839,701	288	1	41	12.4
	1943	1,419	661,457	736,353	92,126	21,026	61.8	1,659,429	892,889	286	5	37	11.3
Pocahontas Region:												
Chesapeake & Ohio	1944	3,032	1,183,451	1,288,050	61,034	51,973	56.5	4,511,039	2,578,258	432	..	75	14.8
	1943	3,034	1,179,095	1,274,660	60,798	51,300	55.8	4,476,949	2,514,013	437	1	75	14.6
Norfolk & Western	1944	2,132	847,765	917,806	72,441	37,771	58.8	3,288,738	1,790,951	305	9	18	5.4
	1943	2,134	888,957	974,678	77,108	38,167	56.8	3,417,550	1,872,212	313	8	23	6.7
Southern Region:												
Atlantic Coast Line	1944	4,953	1,150,533	1,178,530	17,754	31,308	60.2	2,139,538	899,779	364	7	30	7.5
	1943	4,970	1,206,066	1,235,424	16,622	31,565	58.1	2,234,490	944,399	361	1	26	6.7
Central of Georgia†	1944	1,783	368,617	376,456	5,900	8,735	68.7	579,674	271,680	95	..	11	10.4
	1943	1,783	347,977	356,544	5,905	8,312	70.3	546,201	255,084	106	..	10	8.6
Gulf, Mobile & Ohio	1944	1,962	327,756	404,667	2,649	11,648	73.9	744,915	369,775	111	..	8	6.7
	1943	1,962	414,282	531,490	8,638	14,016	69.8	940,342	461,856	112	..	11	8.9
Illinois Central (incl. Yazoo & Miss. Vy)	1944	6,347	1,851,619	1,868,301	34,629	69,217	62.2	4,908,971	2,289,628	665	..	39	5.5
	1943	6,349	1,892,633	1,917,143	37,753	66,864	62.3	4,821,505	2,291,208	614	1	85	12.1
Louisville & Nashville	1944	4,736	1,646,552	1,787,192	48,608	42,023	63.8	3,039,111	1,557,322	422	1	44	9.4
	1943	4,736	1,664,969	1,820,565	47,371	40,012	61.2	2,994,884	1,525,578	433	2	41	8.6
Seaboard Air Line*	1944	4,163	1,090,680	1,315,540	15,085	29,869	65.4	2,008,611	867,643	338	..	25	6.9
	1943	4,171	1,067,937	1,178,094	12,396	27,530	64.8	1,917,831	859,708	310	..	28	8.3
Southern	1944	6,479	2,268,622	2,303,663	49,014	51,179	67.6	3,329,769	1,528,685	593	..	87	12.8
	1943	6,478	2,137,521	2,181,624	31,667	46,299	68.0	3,037,391	1,410,260	595	..	81	12.0
Northwestern Region:												
Chi. & North Western†	1944	8,098	1,105,186	1,157,621	24,628	34,769	68.5	2,290,255	1,095,223	384	23	101	19.9
	1943	8,098	1,050,960	1,093,967	25,705	30,200	65.1	2,116,173	951,300	382	26	88	17.7
Chicago Great Western	1944	1,445	311,498	317,454	11,021	9,468	69.3	631,398	285,702	72	..	9	11.1
	1943	1,447	309,495	315,318	8,464	9,151	68.3	626,694	287,195	74	..	11	12.9
Chi., Milw., St. P. & Pac.†	1944	10,732	1,635,793	1,751,980	81,783	52,519	67.1	3,559,524	1,698,209	541	27	68	10.7
	1943	10,783	1,592,361	1,688,746	80,869	47,299	67.1	3,282,967	1,591,675	525	28	61	9.9
Chi., St. P., Minneap. & Om.	1944	1,606	239,380	257,072	14,745	5,981	66.1	418,891	192,864	90	26	12	9.4
	1943	1,618	219,241	236,420	12,410	5,342	70.7	359,683	169,150	102	23	6	4.6
Duluth, Missabe & I. R.	1944	545	32,335	32,437	683	558	56.2	39,999	20,227	41	7	18	27.3
	1943	546	28,634	28,830	1,798	456	62.4	29,331	14,244	28	29	19	25.0
Great Northern	1944	8,276	1,369,275	1,370,943	69,588	46,637	65.1	3,353,433	1,595,337	419	5	61	12.6
	1943	8,022	1,186,752	1,185,412	43,308	41,569	70.9	2,796,375	1,337,431	411	11	67	13.7
Min., St. P. & S. St. M.†	1944	4,259	559,553	576,212	11,401	14,383	61.3	1,062,770	509,475	136	1	10	6.8
	1943	4,258	466,080	478,189	8,768	11,327	66.6	771,758	369,417	132	3	6	4.3
Northern Pacific	1944	6,571	1,039,894	1,120,118	84,046	40,349	68.0	2,848,711	1,430,797	382	15	49	11.0
	1943	6,571	944,859	1,010,871	77,032	33,025	74.8	2,242,990	1,173,655	385	5	58	12.9
Central Western Region:												
Alton†	1944	915	280,149	297,351	825	7,382	66.6	497,618	229,548	76	..	3	3.8
	1943	915	263,303	287,636	843	6,938	68.9	477,162	235,002	70	2	6	7.7
Atch., Top. & S. Fe (incl. G. C. & S. F. & P. & S. F.)	1944	13,123	3,229,100	3,443,413	196,150	110,858	67.2	7,354,186	3,100,743	838	8	123	12.7
	1943	13,160	3,152,844	3,455,265	219,656	100,374	64.3	6,906,221	2,851,007	803	..	110	12.0
Chi., Burl. & Quincy	1944	8,794	1,509,341	1,590,894	52,354	54,635	66.4	3,740,243	1,760,524	494	..	59	10.7
	1943	8,833	1,573,723	1,676,886	57,377	53,221	65.5	3,672,463	1,751,344	501	..	61	10.9
Chi., Rock I. & Pac.†	1944	7,718	1,490,111	1,568,389	18,503	44,369	67.6	2,847,080	1,235,562	393	..	63	13.8
	1943	7,740	1,606,224	1,664,930	20,766	44,584	64.0	3,048,783	1,322,272	387	..	86	18.2
Denver & R. G. Wn.†	1944	2,399	451,427	524,100	89,611	15,818	78.6	993,846	505,728	178	7	38	17.0
	1943	2,405	479,694	563,247	93,742	14,669	69.3	1,003,033	488,411	186	2	29	13.4
Southern Pacific—Pac. Lines	1944	8,194	2,306,211	2,643,470	373,249	95,845	68.8	6,182,505	2,617,927	834	2	86	9.3
	1943	8,245	2,260,306	2,566,538	378,704	85,499	64.3	5,858,547	2,468,201	811	6	117	12.5
Union Pacific	1944	9,782	3,170,887	3,408,111	301,426	113,674	71.6	7,361,123	3,493,331	819	..	68	7.7
	1943	9,837	2,894,081	3,067,314	241,662	96,431	68.0	6,563,586	3,070,428	791	..	98	11.0
Southwestern Region:												
Mo.-Kans.-Texas Lines	1944	3,241	805,721	832,043	13,722	21,316	62.6	1,453,658	653,269	150	..	18	10.7
	1943	3,281	810,601	835,737	13,542	21,099	57.6	1,493,740	634,406	157	..	14	8.2
Missouri Pacific†	1944	7,071	1,875,929	1,972,575	45,815	66,079	64.4	4,561,474	2,067,446	480	1	57	10.6
	1943	7,070	1,850,276	1,949,635	46,488	56,949	63.5	4,048,785	1,852,388	488	..	76	13.5
Texas & Pacific	1944	1,882	491,489	491,836	11,358	16,518	65.9	1,084,250	450,797	121	14	21	13.5
	1943	1,903	388,961	388,961	5,765	11,805	63.3	803,132	324,855	113	19	7	5.0
St. Louis-San Francisco†	1944	4,616	1,124,436	1,204,921	28,675	27,226	64.7	1,838,648	838,994	321	..	27	7.8
	1943	4,640	1,092,356	1,174,950	24,060	25,158	63.6	1,737,716	790,415	325	..	27	7.7
St. Louis-San Fran. & Texas	1944	159	35,455	35,967	38	596	70.3	37,308	15,355	9	..	..	..
	1943	159	39,702	42,506	50	679	63.5	46,248	19,415	10	..	1	9.1
St. Louis Southw. Lines†	1944	1,600	545,924	555,401	7,822	19,079	71.3	1,164,144	503,637	117	3	24	16.7
	1943	1,600	529,964	542,307	7,062	15,943	63.4	1,068,016	450,628	118	2	24	16.7
Texas & New Orleans	1944	4,339	1,253,727	1,266,610	50,217	31,910	61.6	2,114,220	913,397	260	..	18	6.5
	1943	4,339	1,150,950	1,154,822	26,984	31,483	65.1	2,245,163	956,012	250	1	18	6.7

for the Month of March, 1944, Compared with March, 1943

Region, road, and year	Freight cars on line: Home	Foreign	Total	Per Cent B. O.	G.t.m. per train-hr. excl.locos. and tenders	G.t.m. per train-mi. excl.locos. and tenders	Net ton-mi. per train-mile	Net ton-mi. per l'd. car-mile	Net ton-mi. per car-day	Car miles per car-day	Net daily ton-mi. per road-mi.	Coal lb. per 1000 g.t.m. inc. loco.	Mi. per loco. per day
New England Region:													
Boston & Albany 1944	289	6,533	6,822	0.3	23,536	1,705	712	28.4	614	35.6	10,825	198	95.2
1943	331	6,415	6,746	0.5	25,802	1,846	815	31.2	765	40.3	13,530	174	111.7
Boston & Maine 1944	1,945	11,941	13,886	2.3	36,212	2,411	1,054	29.4	1,100	58.2	8,154	107	107.6
1943	2,150	11,033	13,183	1.8	32,754	2,289	1,020	31.1	1,061	54.2	8,371	108	118.6
N. Y., New H. & Hartf.† 1944	2,814	24,182	26,996	2.2	32,504	2,351	1,038	28.0	696	37.4	10,369	108	98.7
1943	3,569	23,351	26,920	1.4	32,485	2,383	1,048	28.6	714	38.2	10,455	104	97.9
Great Lakes Region:													
Delaware & Hudson 1944	3,515	7,196	10,711	2.0	49,401	3,118	1,646	38.9	1,777	70.2	23,559	112	83.8
1943	4,076	6,224	10,300	3.0	46,215	2,842	1,496	39.3	1,832	73.4	21,343	109	78.5
Del., Lack. & Western 1944	5,173	13,514	18,687	2.6	41,639	2,863	1,363	31.1	933	42.9	17,996	130	97.5
1943	5,951	12,022	17,973	2.5	41,488	2,977	1,439	32.7	968	43.6	18,200	132	101.6
Erie 1944	11,331	29,215	40,546	2.4	47,181	2,991	1,316	29.5	1,166	61.0	21,111	102	111.7
1943	12,374	27,155	39,529	1.8	46,711	3,014	1,379	31.0	1,298	64.4	22,743	102	115.6
Grand Trunk Western 1944	2,325	6,678	9,003	3.8	43,535	2,270	980	29.0	1,035	56.8	8,744	88	132.5
1943	1,725	7,075	8,800	2.7	38,969	1,937	861	30.1	838	43.6	7,831	93	124.0
Lehigh Valley 1944	6,600	23,126	29,726	1.6	46,206	3,048	1,420	33.4	884	43.9	21,219	120	153.4
1943	7,151	19,810	26,961	1.7	46,649	3,063	1,481	34.5	803	37.0	17,690	114	130.0
New York Central 1944	43,816	108,137	151,953	2.3	40,047	2,685	1,234	32.5	1,017	50.8	15,161	111	114.9
1943	47,497	99,325	146,822	2.8	39,666	2,714	1,268	34.4	1,090	52.8	15,498	105	115.5
New York, Chi. & St. L. 1944	2,537	15,419	17,956	1.9	45,059	2,593	1,178	30.0	1,975	100.4	20,393	94	164.8
1943	2,883	14,974	17,857	2.3	44,675	2,519	1,182	32.1	1,888	89.8	20,998	92	178.7
Pere Marquette 1944	2,874	8,806	11,680	2.5	37,650	2,250	1,064	32.3	1,346	64.1	8,351	97	108.4
1943	2,963	9,479	12,442	2.4	36,026	2,116	1,003	33.4	1,243	58.6	7,978	97	112.3
Pitts. & Lake Erie 1944	2,592	10,256	12,848	4.0	50,615	3,712	2,151	51.6	606	19.4	31,444	97	83.4
1943	2,981	9,997	12,978	2.9	50,255	3,890	2,271	52.2	586	18.4	31,543	90	78.5
Wabash 1944	6,083	13,524	19,607	2.4	44,927	2,393	1,116	29.8	1,415	65.9	11,452	114	122.2
1943	6,713	13,218	19,931	1.2	44,666	2,386	1,119	31.3	1,405	65.9	11,980	114	128.0
Central Eastern Region:													
Baltimore & Ohio 1944	38,273	53,754	92,027	2.6	30,407	2,444	1,188	35.0	1,071	48.7	15,564	155	102.6
1943	36,992	49,159	86,151	2.3	30,116	2,422	1,190	35.5	1,109	49.8	15,762	152	105.2
Central of New Jersey† 1944	4,876	20,586	25,462	1.4	27,450	2,709	1,328	36.2	400	18.6	17,112	150	104.8
1943	5,320	22,595	27,915	.7	27,593	2,454	1,275	39.0	388	15.7	17,206	147	108.1
Chicago & Eastern Ill. 1944	1,931	5,744	7,675	2.3	35,594	2,203	991	32.3	1,405	73.5	11,130	121	132.6
1943	1,881	4,992	6,873	3.0	34,331	2,120	939	32.6	1,179	63.3	9,169	127	128.9
Elgin, Joliet & Eastern 1944	8,615	6,980	15,595	2.7	15,833	2,312	1,254	43.0	344	12.3	14,052	143	101.1
1943	9,075	8,103	17,178	3.0	16,257	2,204	1,183	43.2	321	11.8	14,055	146	102.0
Long Island 1944	25	5,502	5,527	.6	6,528	906	386	32.7	84	4.6	1,315	335	51.6
1943	11	4,547	4,558	.4	6,579	862	367	33.3	98	5.4	1,174	348	57.6
Pennsylvania System 1944	110,463	121,042	231,505	3.1	34,442	2,747	1,301	34.3	836	40.2	21,150	134	105.6
1943	123,800	123,394	247,194	2.7	33,416	2,748	1,318	34.9	806	37.9	20,287	131	107.3
Reading 1944	12,437	27,032	39,469	1.7	29,602	2,532	1,353	41.7	638	24.4	19,197	135	89.8
1943	12,787	27,362	40,149	2.1	29,514	2,512	1,352	42.5	719	27.4	20,298	129	92.3
Pocahontas Region:													
Chesapeake & Ohio 1944	36,577	15,817	52,394	1.1	52,914	3,869	2,211	49.6	1,667	59.5	27,431	86	92.3
1943	31,856	16,906	48,762	1.1	52,647	3,858	2,167	49.0	1,734	63.5	26,729	84	92.9
Norfolk & Western 1944	32,581	7,773	40,354	1.6	59,718	3,941	2,146	47.4	1,511	54.2	27,098	95	103.4
1943	29,595	8,128	37,723	1.4	57,019	3,901	2,137	49.1	1,666	59.8	28,301	99	107.4
Southern Region:													
Atlantic Coast Line 1944	8,197	23,329	31,526	2.1	29,895	1,869	786	28.7	945	54.7	5,860	116	101.6
1943	8,723	24,909	33,632	2.2	28,227	1,864	788	29.9	964	55.4	6,130	111	108.9
Central of Georgia† 1944	2,063	6,880	8,943	1.1	28,916	1,587	744	31.1	1,012	47.4	4,915	126	123.1
1943	2,556	6,840	9,396	1.0	27,369	1,585	740	30.7	926	43.0	4,615	123	109.0
Gulf, Mobile & Ohio 1944	1,867	7,402	9,269	.9	40,322	2,278	1,131	31.7	1,261	53.7	6,080	118	114.2
1943	2,650	7,390	10,040	.9	39,653	2,298	1,129	33.0	1,522	66.2	7,594	119	147.6
Illinois Central (incl. 1944	18,893	32,136	51,029	.9	43,750	2,712	1,265	33.1	1,437	69.8	11,637	124	90.0
Yazoo & Miss. Vy) 1943	19,502	30,418	49,920	.9	41,316	2,601	1,236	34.3	1,458	68.3	11,641	122	95.0
Louisville & Nashville 1944	30,949	16,485	47,434	2.4	27,831	1,846	946	37.1	1,085	45.9	10,607	135	131.5
1943	28,844	15,814	44,658	1.8	26,295	1,799	916	38.1	1,126	48.2	10,391	143	131.4
Seaboard Air Line* 1944	6,526	22,033	28,559	1.4	29,718	1,880	812	29.0	989	52.1	6,723	134	129.0
1943	7,779	21,673	29,452	1.3	27,244	1,840	825	31.2	953	47.1	6,649	124	124.9
Southern 1944	15,590	33,300	48,890	1.7	24,662	1,487	683	29.9	1,020	50.5	7,611	147	115.6
1943	16,345	29,683	46,028	1.7	23,911	1,438	668	30.5	982	47.4	7,023	151	110.7
Northwestern Region:													
Chi. & North Western† 1944	21,207	25,971	47,178	3.0	32,668	2,141	1,024	31.5	683	31.7	4,363	136	81.2
1943	21,656	24,982	46,638	4.5	31,174	2,072	932	31.5	635	31.0	3,789	139	78.8
Chicago Great Western 1944	1,066	4,338	5,404	1.2	35,349	2,043	924	30.2	1,624	77.7	6,378	130	138.9
1943	1,335	4,231	5,566	1.2	35,273	2,028	929	31.4	1,720	80.3	6,402	130	133.0
Chi., Milw., St. P. & Pac.† 1944	24,241	29,996	54,237	1.4	34,376	2,194	1,047	32.3	1,015	46.8	5,104	131	99.2
1943	26,373	25,477	51,850	1.7	31,765	2,074	1,006	33.7	989	43.8	4,762	135	100.0
Chi., St. P., Minneap. & Om. 1944	995	7,244	8,239	3.2	26,161	1,787	823	32.2	742	34.8	3,874	116	72.5
1943	1,174	6,020	7,194	8.2	23,513	1,672	786	31.7	699	31.2	3,372	121	64.2
Duluth, Missabe & I. R. 1944	15,182	260	15,442	2.3	18,390	1,314	664	36.2	42	2.1	1,197	181	22.5
1943	14,758	273	15,031	2.2	15,003	1,075	522	31.2	30	1.6	842	206	18.4
Great Northern 1944	23,104	24,867	47,971	1.8	36,223	2,467	1,174	34.2	1,166	52.3	6,218	115	103.4
1943	25,957	17,666	43,623	2.3	35,243	2,376	1,136	32.2	1,031	45.2	5,378	115	87.0
Min., St. P. & S. St. M.† 1944	6,627	8,902	15,529	2.7	33,098	1,928	924	35.4	1,045	48.1	3,859	102	133.9
1943	8,014	5,748	13,762	3.5	28,774	1,678	803	32.6	865	39.8	2,799	110	115.9
Northern Pacific 1944	17,512	21,125	38,637	3.1	41,168	2,749	1,381	35.5	1,290	53.5	7,024	138	93.8
1943	19,913	14,270	34,183	4.1	35,545	2,391	1,251	35.5	1,115	42.0	5,762	148	85.1
Central Western Region:													
Alton† 1944	1,021	5,106	6,127	3.3	37,747	1,794	828	31.1	1,210	58.4	8,093	140	129.1
1943	1,011	7,625	8,636	2.4	37,480	1,816	894	33.9	997	42.7	8,285	136	129.4
Atch., Top. & S. Fe (incl. 1944	42,762	38,091	80,853	2.2	42,391	2,292	966	28.0	1,228	65.4	7,622	120	127.1
G. C. & S. F. & P. & S. F.) 1943	48,574	41,382	89,956	3.2	37,529	2,206	911	28.4	1,041	57.0	6,988	126	135.4
Chi., Burl. & Quincy 1944	16,493	25,488	41,981	2.2	39,905	2,496	1,175	32.2	1,266	59.2	6,458	119	100.4
1943	17,108	25,121	42,229	2.6	37,431	2,352	1,122	32.9	1,379	64.0	6,396	119	105.0
Chi., Rock I. & Pac.† 1944	10,648	21,539	32,187	2.7	34,296	1,922	834	27.8	1,245	66.1	5,164	121	116.3
1943	13,205	23,461	36,666	3.4	31,838	1,913	829	29.7	1,194	62.9	5,511	126	120.3
Denver & R. G. Wn.† 1944	8,048	6,894	14,942	3.6	33,023	2,233	1,136	32.0	1,102	43.8	6,800	178	92.4
1943	7,442	10,338	17,780	2.2	27,096	2,119	1,032	33.3	886	38.4	6,551	185	103.6
Southern Pacific—Pac. Lines 1944	24,245	54,184	78,429	2.5	38,293	2,696	1,142	27.3	1,043	55.5	10,306	103	110.1
1943	27,769	56,417	84,186	2.2	34,201	2,605	1,098	28.9	929	50.1	9,657	107	107.2
Union Pacific 1944	26,214	37,675	63,989	2.7	43,704	2,357	1,119	30.7	1,761	80.0	11,520	133	137.8
1943	30,333	43,383	73,716	2.8	39,228	2,293	1,073	31.8	1,345	62.1	10,069	131	124.9
Southwestern Region:													
Mo.-Kans.-Texas Lines 1944	1,926	7,682	9,608	0.3	32,617	1,813	815	30.6	2,219	115.6	6,502	90	165.8
1943	2,942	10,464	13,406	1.8	31,561	1,856	788	30.1	1,503	86.8	6,237	97	168.7
Missouri Pacific† 1944	11,636	31,513	43,149	1.3	41,815	2,444	1,108	31.3	1,592	79.0	9,432	107	127.5
1943	9,781	36,500	46,281	1.4	36,151	2,198	1,006	32.5	1,283	62.1	8,452	119	122.3
Texas & Pacific 1944	1,699	7,521	9,220	1.2	40,516	2,228	926	27.3	1,582	88.0	7,727	94	113.4
1943	1,995	5,230	7,225	.9	38,475	2,093	847	27.5	1,370	78.7	5,507	110	98.6
St. Louis-San Francisco† 1944	7,472	10,817	18,289	2.2	32,158	1,641	749	30.8	1,422	71.4	5,863	140	118.7
1943	8,719	11,027	19,746	3.0	31,193	1,602	729	31.4	1,316	65.9	5,495	142	114.6
St. Louis-San Fran. & Texas 1944	....	285	285	8.4	21,114	1,056	434	25.8	1,852	102.3	3,115	133	124.7
1943	....	328	328	13.7	19,522	1,170	491	28.6	1,837	101.1	3,939	134	133.5
St. Louis Southw. Lines† 1944	1,133	6,789	7,922	1.5	34,751	2,145	928	26.4	2,200	117.0	10,154	83	129.0
1943	1,400	5,832	7,232	1.3	32,112	2,030	857	28.3	1,821	101.6	9,085	93	130.4
Texas & New Orleans 1944	4,107	17,045	21,152	2.4	32,321	1,859	803	29.0	1,395	73.8	6,791	91	141.6
1943	4,197	21,924	26,121	1.5	29,742	1,820	775	30.0	1,224	66.3	7,107	96	161.9

* Report of receivers.
† Report of trustee or trustees.
Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

INNER-SEAL



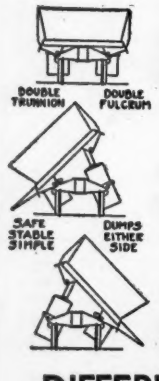
WATERPROOF
WEATHER STRIPPING
FOR
PASSENGER COMFORT
•
INNER-SEAL IS APPLIED TO
Body-End Doors • Vestibule Side Doors • Vestibule Trap Doors • Refrigerator Car Doors • Windows • Locomotive Closures •

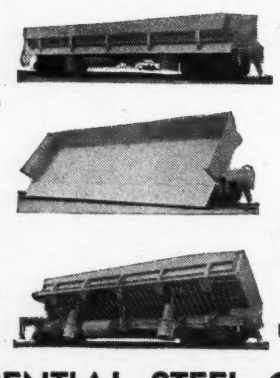
Inner Seal

Established 1837
BRIDGEPORT FABRICS, INC.
BRIDGEPORT CONN.
UPHOLSTERY CLOTH • NARROW FABRICS • ELASTIC WEBBING

INCREASED PASSENGER COMFORT
Steam Couplers A. R. A. STANDARD
Flexible Conduits REPLACES RUBBER HOSE
Vapor Systems THERMOSTATIC CONTROL
Air Conditioning Controls
WITH
VAPOR
ENGINEERED PRODUCTS
BE SURE IT'S GENUINE VAPOR ENGINEERED
VAPOR SYSTEM
GUARANTEED EFFICIENCY
VAPOR CAR HEATING CO., INC.
RAILWAY EXCHANGE, CHICAGO, ILL.

HYMAN-MICHAELS COMPANY
Relaying Rails ★★★ Dismantling
Used railroad equipment—cars—locomotives
Freight Car Replacement Parts
Complete stocks of guaranteed used freight car parts carried on hand by us at all times. Located conveniently for shipment to any part of country. Write — Phone — Wire — when interested in used Rails, Equipment, Cars, Car or Track Dismantling, or Car Parts.
Main Office
122 SOUTH MICHIGAN AVENUE
CHICAGO, ILLINOIS
Branches
New York, St. Louis, San Francisco, Los Angeles, Houston, Havana, Cuba
SERVICE QUALITY RELIABILITY





AIR DUMP CARS
RAIL CARS
MINE CARS
AND
LOCOMOTIVES
AXLESS TRAINS
COMPLETE
HAULAGE SYSTEMS
DIFFERENTIAL STEEL CAR CO.
FINDLAY, OHIO

DSP INC. ORGANIZATIONS
FOR SALE
Used Locomotives, Cars, & Equipment of All Kinds
LARGE STOCKS OF RELAYING RAIL AND ACCESSORIES
COMPLETE RAILROADS
BOUGHT — SOLD — LIQUIDATED
DULIEN STEEL PRODUCTS, INC.
Organizations
of Washington
200 National Bldg.
Seattle 4, Wash.
of New York
2280 Woolworth Bldg.
New York 7, N. Y.